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ABSTRACT

The Kentucky Educational Assessment Program is an ongoing effort to gather information regarding progress toward attainment of the educational goals for Kentucky citizens. Major emphasis is on the determination of the actual level of pupil performance in relation to desired performance. In the fourth grade, relevant information was gathered in three goal areas: (1) General Education, (2) Human Relationships, and (3) Physical and Mental Well Being. Recognizing that information attained through a statewide assessment program should be utilized for decision-making to improve educational programs, objectives, and goals, this assessment procedure was developed to be valid at three levels: local district, Educational Development District (EDD), and statewide. Regional and statewide assessment data are reported. (BJG)

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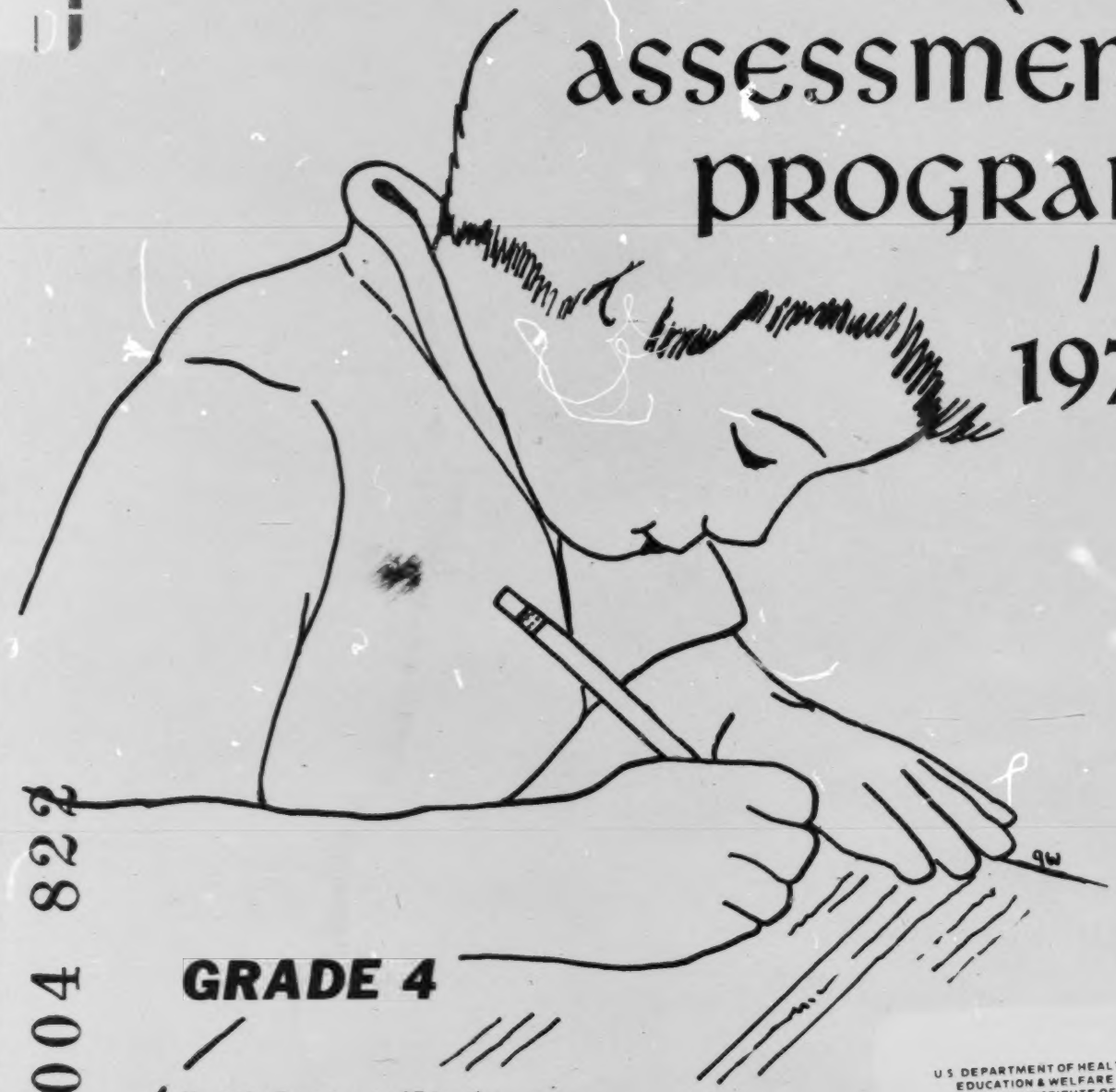

GRADE 4

Kentucky Department of Education
Frankfort, Kentucky

TM004 822

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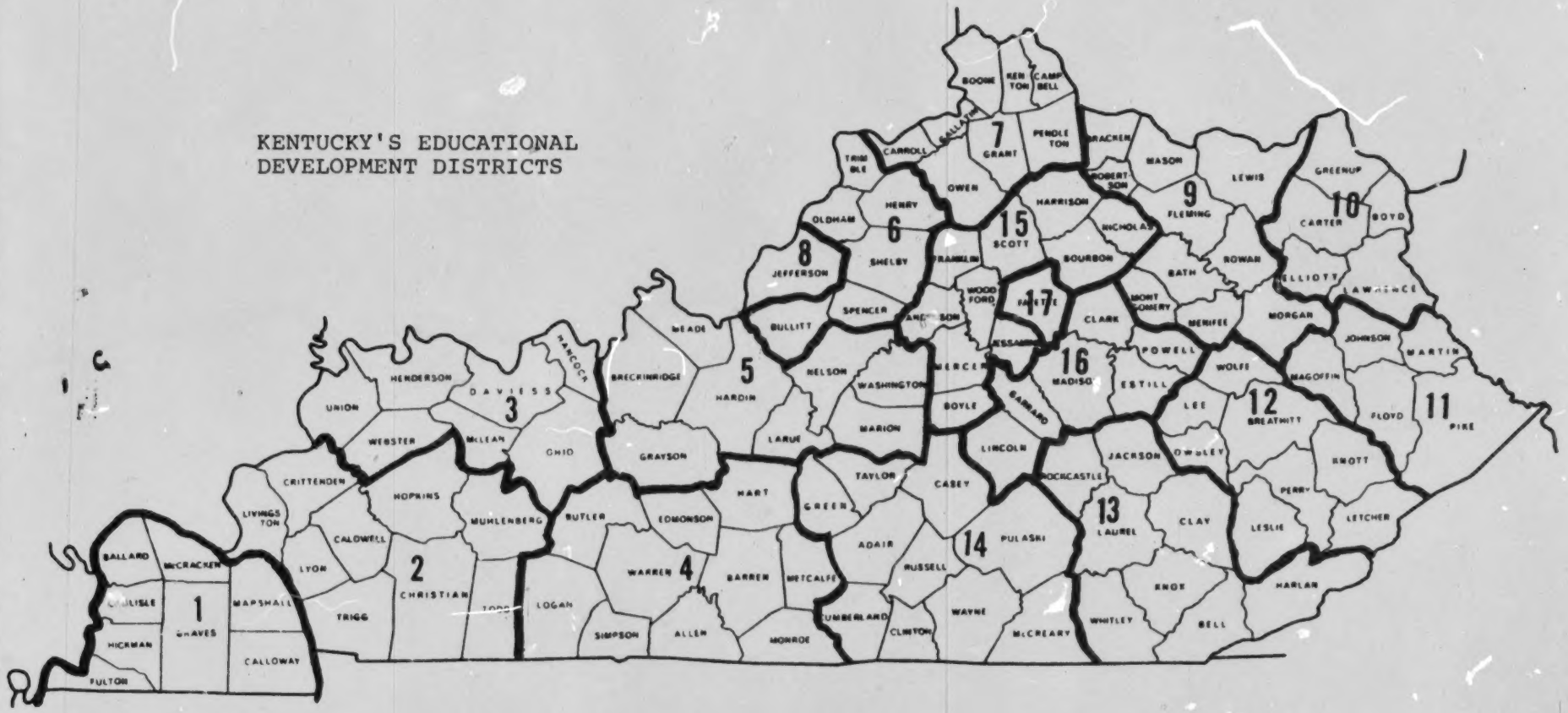

KENTUCKY EDUCATIONAL ASSESSMENT PROGRAM

TECHNICAL REPORT FOR FOURTH GRADE

Prepared by

Division of Evaluation
Office of Planning and Research

With the assistance of

personnel of the

Statewide Testing Program

and

Division of Computer Services

Lyman V. Ginger
Superintendent of Public Instruction

Kentucky Department of Education
Frankfort, Kentucky

1974

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF EDUCATION
FRANKFORT, KY. 40601

LYMAN V. GINGER
SUPERINTENDENT OF PUBLIC INSTRUCTION

Current economic conditions stress the imperative nature for the development of a comprehensive accountability program in Kentucky education. The ability to report concisely where we are and precisely where we are going continues to be a priority activity in the development of a credible model to sustain support of public education.

The Kentucky Department of Education is committed to a broad plan of action to move positively in the direction of accountability in education. With the adoption of Goals of Education in Kentucky by the State Board, there exists the base from which a viable effort can be implemented with a comprehensive assessment program being a major component.

This report represents a continuing effort by the department to report to the public and educators the progress being made toward our goals. Further development and implementation of a comprehensive assessment plan will ultimately result in measurement of progress toward the achievement of all the goals of education throughout the state.

Lyman V. Ginger

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FOREWORD

The Kentucky Educational Assessment Program is an ongoing effort to gather information regarding progress toward attainment of the educational goals for Kentucky citizens. The source of the educational goals presented in this report is Goals of Education in Kentucky as published in 1973 by the Kentucky State Department of Education.

The reader should be aware that it is not feasible to conduct an assessment program for all of the educational goals for Kentucky citizens in a single year. Therefore, the 1974 assessment program focused upon predominant concerns determined from a survey of Kentucky citizens published in 1970 by the Kentucky State Department of Education. Those priority concerns included development of basic learning skills; development of knowledge and skills related to occupational competence; development of positive attitudes toward self, peers, school, reading, mathematics; and the development of positive attitudes toward citizenship. These concerns encompass five of the eight goal areas as set forth in the Goals of Education in Kentucky published in 1973. The goals are broad and general in nature; however, this is as it should be because it reflects long-range expectations. Specificity and detail were achieved through the development of objectives and the use of selected measurement items for assessing the status of pupil performance in relation to the priority developmental areas expressed in the composite goal.

It is recognized that a statewide assessment program can be justified only if the information obtained is utilized as the basis for decision-making to improve educational programs, objectives, and goals. Therefore, the assessment procedure was developed to be valid at three levels--local district, Educational Development District (EDD), and statewide. District

level data were provided to the individual local districts sampled, while regional and statewide assessment data are reported within this document.

Analyses of the assessment data were performed at several levels. For example, in reading, results are reported for the general areas of reading vocabulary and reading comprehension, as well as for specific skills/concepts within these general areas. Additional detailed information is provided by the reporting of individual measurement item results contributing to score levels for the specific skills/concepts. Reporting of data in this manner provides the educator with the opportunity to analyze local district results, as well as regional and statewide results at several levels in each developmental area described by the broad goal. The extent to which state, regional, and local educators find the present document to be useful in this regard will provide a measure of success of the Kentucky Educational Assessment Program.

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INTRODUCTION

The major emphasis of the Kentucky Educational Assessment Program was to determine the actual level of performance of Kentucky pupils in relation to desired performance. The purpose of the assessment activities was to provide preliminary answers to the question: "Are Kentucky pupils doing as well as expected?"

In the fourth grade, relevant information was gathered in three of the eight goal areas which were established in 1973. They were:

Goal Area I: General Education

Goal Area III: Human Relationships

Goal Area VI: Physical and Mental Well Being

A summary of the Goals of Education in Kentucky is provided in Appendix A.

To measure performance within the goal areas, two concepts were employed which reflect current thinking in the area of educational assessment. These concepts are the development of performance objectives and the identification of learner needs.

Performance Objective

A performance objective is a statement that expresses the performance level of expected behavior for a pupil or pupils in regard to a selected area of concern and measurement instrument. Performance objectives provide for the determination of actual pupil attainment in regard to expectations of pupil attainment by providing a criterion and other specific information necessary for determining progress toward meeting educational goals.

Example Performance Objective

> During the spring semester of 1974, Kentucky pupils will demonstrate reading comprehension by attaining an average grade equivalent score equal to or exceeding the criterion

as measured by the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills.

Performance objectives for the 1974 Kentucky Educational Assessment Program were developed for individual skills/concepts within the general assessment areas. Numbers assigned to individual performance objectives reflect their position within a goal/objective hierarchy. Figure 1 illustrates the numbering system utilized.

GOAL AREA 1.0

Goal 1.1
Performance Objective 1.1.1 -- General area
Performance Objective 1.1.1.1
Performance Objective 1.1.1.2 } Specific skills/concepts
Performance Objective 1.1.1.3

FIGURE 1

GOAL AND OBJECTIVE NUMBERING

A complete list of the goals and related performance objectives used in the study is presented in Appendix B.

In developing the performance objectives for the assessment program, key terms described the behaviors measured by the objectives. These terms and definitions are:[1]

KNOWLEDGE	Involves the recognition and recall of facts (e.g., defining terms, recalling names, dates, persons, identifying words, etc.).
COMPREHENSION	The learner interprets, translates, summarizes, or paraphrases given material. The person can organize the material into another language or form of communication (e.g., reading a book or musical scores, grasping the thought of material studied, ability to describe something in one's own words, etc.).

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[1]Benjamin S. Bloom, et al., Taxonomy of Educational Objectives, Handbook I: Cognitive Domain (New York: David McKay Company, Inc., 1956).

David R. Krathwohl, et al., Taxonomy of Educational Objectives, Handbook II: Affective Domain (New York: David McKay Company, Inc., 1956).

APPLICATION	Involves the use of material in a situation which is different from that situation in which it was originally learned (e.g., the use of abstract ideas, principles, or theories in problem-solving).
ANALYSIS	Involves separating a complex entity into its parts, drawing comparisons and relationships between the elements (e.g., ability to recognize assumptions, to distinguish cause and effect relationships, reorganization of biases or points of view, etc.).
RESPOND	Involves the indication of affective behavior consistent with given expectations in a defined situation.

In addition to describing behavior, each objective specified a measurement instrument which assessed the behavior. Two test instruments were utilized in the 1974 Kentucky Educational Assessment Program for fourth grade. The Comprehensive Tests of Basic Skills, Form Q, Level 2, were used as the measurement device for the performance objectives dealing with cognitive behavior and the Kentucky Student Attitude Inventory (see Appendix D) was employed as the measurement instrument for attitudinal objectives. Assessment of the citizenship goal was not included at the fourth grade level for the 1974 program.

Learner Needs

A learner need is identified when actual pupil performance is below expected pupil performance as measured by a specific instrument. Figure 2 illustrates the concept of a learner need.

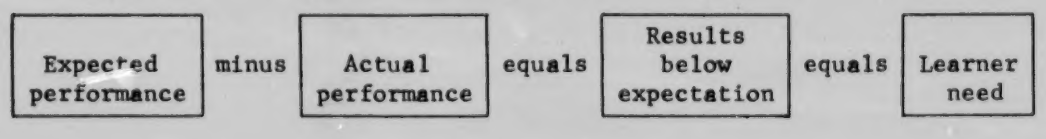

FIGURE 2

LEARNER NEED

The identification of a learner need serves to indicate those areas in which pupils are not meeting expectations. Additional data should be collected and analyzed to determine the degree of need and the causes for the existence of learner needs. It should be recognized that the interaction of many factors (variables) contribute to indications of learner needs. A detailed examination of these factors is an essential step in the comprehensive assessment of educational programs.

In order to gather meaningful data describing educational performance for identification of indicated learner needs at the district, regional, and statewide levels, random sampling techniques were employed for selecting districts and pupils to participate. A description of the sampling procedures and a list of participating districts including the number of pupils tested are provided in Appendix C.

STATEWIDE ASSESSMENT RESULTS

A summary of results for Kentucky pupils is provided in the present section. Actual attainment levels in relation to expected attainment levels are presented for general skill areas and specific skills/concepts by goal area. In addition, sample assessment items are provided for the general skill areas. Data tables indicating results for boys and for girls are presented in Appendix E. Item analysis results organized by skills/concepts are provided in Appendix F.

GOAL AREA I: GENERAL EDUCATION

Goal 1.1: Each citizen of the Commonwealth should be assured an opportunity to realize his full potential in written and oral communication, reading, computation, and mathematical concepts.

The first goal in the general education goal category was assessed in the areas of (1) reading, (2) language, (3) arithmetic, and (4) study skills using the Comprehensive Tests of Basic Skills, Form Q, Level 2. A criterion of 4.7 grade equivalency was established as the level of desired performance. The results for Goal 1.1 are presented below.

Reading

Reading Vocabulary

Performance Objective 1.1.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of vocabulary by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Reading Vocabulary Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Reading Vocabulary

Test Situation: Pupils were asked to choose the word which had a similar meaning to an underlined word.

Item: a large dog

a. brown
b. big
c. small
d. old

Results

For the statewide sample, 46 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.7.

Specific Skills/Concepts Related to Knowledge of Reading Vocabulary

1.1.1.1 Knowledge of the Meaning of Words in Context

The expected criterion level for fourth grade pupils was established as 57 percent. The average percentage of correct items for the statewide sample was 54 percent.

Reading Comprehension

Performance Objective 1.1.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate reading comprehension by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Reading Comprehension

Test Situation: Pupils were asked to read written material and choose the best answer to questions related to interpreting translating, summarizing, or paraphrasing the material.

Item: (Story about mountain climbing) John says in his story that mountain climbing

a. is exciting, but hazardous.
b. is not exciting, but scary.
c. is hard work.
d. is good exercise.

Results

For the statewide sample, 44 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.8.

Specific Skills/Concepts Related to Reading Comprehension

1.1.2.1 Knowledge of Directly Stated Details (Literal Meaning)

The expected criterion level for fourth grade pupils was established as 52 percent. The average percentage of correct items for the fourth grade statewide sample was 48 percent.

1.1.2.2 Comprehension of Words and Phrases (Simple Rewording)

The expected criterion level for fourth grade pupils was established as 64 percent. The average percentage of correct items for the fourth grade statewide sample was 60 percent.

1.1.2.3 Comprehension (Paraphrasing) of the Meaning of Ideas

The expected criterion level for fourth grade pupils was established as 65 percent. The average percentage of correct items for the fourth grade statewide sample was 61 percent.

1.1.2.4 Comprehension of Main Ideas

The expected criterion level for fourth grade pupils was established as 56 percent. The average percentage of correct items for the fourth grade statewide sample was 53 percent.

1.1.2.5 Comprehension of Relationships

The expected criterion level for fourth grade pupils was established as 46 percent. The average percentage of correct items for the fourth grade statewide sample was 43 percent.

1.1.2.6 Comprehension (Draw Conclusions) of Given Facts and Statements

The expected criterion level for fourth grade pupils was established as 46 percent. The average percentage of correct items for the fourth grade statewide sample was 43 percent.

1.1.2.7 Comprehension (Inference) of Contextual Clues

The expected criterion level for fourth grade pupils was established as 60 percent. The average percentage of correct items for the fourth grade statewide sample was 54 percent.

1.1.2.8 Analysis of Indefinite or Incomplete Statements (Extended Meaning)

The expected criterion level for fourth grade pupils was established as 63 percent. The average percentage of correct items for the fourth grade statewide sample was 60 percent.

Conclusions--Reading Results

Two areas related to the achievement of Kentucky pupils in reading were assessed statewide at the fourth grade level:

1. Knowledge of vocabulary
2. Reading comprehension

Knowledge of Vocabulary

The assessment results did not indicate a learner need for fourth grade pupils in knowledge of vocabulary; however, this was not the case for the related skill/concept of knowledge of the meaning of words in context.

Reading Comprehension

The criterion of an average 4.7 grade equivalency was attained. Consequently, a learner need was not identified.

However, the assessment results provide evidence of learner needs for the following skills/concepts related to reading comprehension:

1. Knowledge of directly stated details
2. Comprehension of words and phrases
3. Comprehension of meaning of ideas
4. Comprehension of main ideas
5. Comprehension of relationships
6. Comprehension of given facts and statements
7. Comprehension of contextual clues
8. Analysis of indefinite or incomplete statements

Item analysis data, listed by reading skill/concept for individual Educational Development Districts, as well as statewide, may be reviewed in Appendix F. Reading Results by Educational Development District for reading subtests and individual skills/concepts are provided in a later section of the present report.

Language

Spelling

Performance Objective 1.1.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of spelling by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language/Spelling Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Spelling

Test Situation: Pupils were asked to look at four words and identify the word that was incorrectly spelled or mark "none" if all four words were spelled correctly.

Item:
a. hevy
b. slow
c. dart
d. spoon
e. none

Results

For the statewide sample, 43 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.7.

Specific Skills/Concepts Related to Knowledge of Spelling

1.1.3.1 Knowledge of Correctly and Incorrectly Spelled Words

The expected criterion level for fourth grade pupils was established at 58 percent. The average percentage of correct items for the fourth grade statewide sample was 54 percent.

Mechanics of Language

Performance Objective 1.1.4

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of the mechanics of language by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Items for Application of Mechanics of Language

Test Situation: Pupils were asked to read a sentence and to choose the proper punctuation wherever a blank was placed.

Item: The date is Jan___ 18.

a. comma (,)
b. period (.)
c. question mark (?)
d. quotation marks (")

Test Situation: Pupils were also asked to find the mistake in capitalization in underlined parts of sentences. "None" was marked if no capitalization errors were present.

Item: The story is called Alice in wonderland and it is about
a. b. c.

the adventures of a little girl named Alice. None
d. e.

Results

For the statewide sample, 49 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 5.1.

Specific Skills/Concepts Related to Application of the Mechanics of Language

1.1.4.1 Application of Punctuation Skills

The expected criterion level for fourth grade pupils was established as 63 percent. The average percentage of correct items for the fourth grade statewide sample was 59 percent.

1.1.4.2 Application of Capitalization Skills

The expected criterion level for fourth grade pupils was established as 40 percent. The average percentage of correct items for the fourth grade statewide sample was 45 percent.

Language Expression

Performance Objective 1.1.5

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of language expression by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Language Expression

Test Situation: Pupils were asked to choose the best word or phrase to fill a blank in a sentence, story, or poem.

Item: We _____ now going to the movie.

a. was
b. are
c. am
d. is

Results

For the statewide sample, 46 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.8.

Specific Skills/Concepts Related to Application of Language Expression

1.1.5.1 Application of Correct Grammatical Usage

The expected criterion level for fourth grade pupils was established as 61 percent. The average percentage of correct items for the fourth grade statewide sample was 54 percent.

1.1.5.2 Comprehension of Clarity and/or Economy of Expression

The expected criterion level for fourth grade pupils was established as 35 percent. The average percentage of correct items for the fourth grade statewide sample was 34 percent.

1.1.5.3 Comprehension of the Author's Implication (Word Choice)

The expected criterion level for fourth grade pupils was established as 55 percent. The average percentage of correct items for the fourth grade statewide sample was 51 percent.

Conclusions--Language Results

Three areas related to the achievement of Kentucky pupils in language were assessed statewide at the fourth grade level:

1. Knowledge of spelling
2. Application of the mechanics of language
3. Application of language expression

Knowledge of Spelling

The assessment results did not provide evidence of a learner need for fourth grade pupils in knowledge of spelling; however, this was not the case for the related skill/concept of knowledge of correctly and incorrectly spelled words.

Application of the Mechanics of Language

The criterion of 4.7 was exceeded by four months. However, the compiled results indicate that the desired criterion was not met for the related skill/concept concerned with application of punctuation skills. The results for application of capitalization skills demonstrate that, for this skill/concept, the criterion level was exceeded.

Application of Language Expression

The pupil performance data for application of language expression did not indicate the existence of a learner need. The criterion average percentage of correct answers was not attained in the following related skills/concepts areas:

1. application of correct grammatical usage.
2. comprehension, clarity, and/or economy of expression.
3. comprehension of the author's implication.

Item analysis data, listed by language skills/concepts for individual Educational Development Districts, as well as statewide, may be reviewed in Appendix F. Language results by Educational Development District for language subtests and individual skills/concepts are provided in a later section of the present report.

Arithmetic

Arithmetic Computation

Performance Objective 1.1.6

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of arithmetic computation by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Arithmetic Comprehension

Test Situation: Pupils were asked to choose the correct answer to problems of addition, subtraction, multiplication, and division.

Item: 221
x 3

a. 278
b. 224
c. 663
d. 673

Results

For the statewide sample, 47 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.7.

Specific Skills/Concepts Related to Application of Arithmetic Computation

1.1.6.1 Application of Addition Skills

The expected criterion level for fourth grade pupils was established as 64 percent. The average percentage of correct items for the fourth grade statewide sample was 64 percent.

1.1.6.2 Application of Subtraction Skills

The expected criterion level for fourth grade pupils was established as 62 percent. The average percentage of correct items for the fourth grade statewide sample was 62 percent.

1.1.6.3 Application of Multiplication Skills

The expected criterion level for fourth grade pupils was established as 54 percent. The average percentage of correct items for the fourth grade statewide sample was 56 percent.

1.1.6.4 Application of Division Skills

The expected criterion level for fourth grade pupils was established as 53 percent. The average percentage of correct items for the fourth grade statewide sample was 54 percent.

Arithmetic Concepts

Performance Objective 1.1.7

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of arithmetic concepts by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Arithmetic Concepts

Test Situation: Pupils were asked to choose the correct answer for questions relating to various arithmetic concepts.

Item: Three thousand four is the same as:

a. 3,004
b. 304
c. 3,040
d. 34,000

Results

For the statewide sample, 47 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.7.

Specific Skills/Concepts Related to Comprehension of Arithmetic Concepts

1.1.7.1 Knowledge of Arithmetic Concepts

The expected criterion level for fourth grade pupils was established as 53 percent. The average percentage of correct items for the fourth grade statewide sample was 48 percent.

1.1.7.2 Comprehension of Arithmetic Concepts (Converting Form)

The expected criterion level for fourth grade pupils was established as 57 percent. The average percentage of correct items for the fourth grade statewide sample was 56 percent.

1.1.7.3 Comprehension of Equations

The expected criterion level for fourth grade pupils was established as 66 percent. The average percentage of correct items for the fourth grade statewide sample was 65 percent.

1.1.7.4 Comprehension of Comparative Relationships

The expected criterion level for fourth grade pupils was established as 56 percent. The average percentage of correct items for the fourth grade statewide sample was 54 percent.

1.1.7.5 Comprehension of Relationships (Ratio, Time, Part-Whole, Sequence, Geometric)

The expected criterion level for fourth grade pupils was established as 54 percent. The average percentage of correct items for the fourth grade statewide sample was 58 percent.

1.1.7.6 Analysis of the Components of Arithmetic Problems (Organization)

The expected criterion level for fourth grade pupils was established as 44 percent. The average percentage of correct items for the fourth grade statewide sample was 43 percent.

Arithmetic Applications

Performance Objective 1.1.8

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of skills in solving arithmetic word problems by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Skills in Solving Arithmetic Word Problems

Test Situation: Pupils were asked to read an arithmetic word problem and to choose the correct answer for that problem.

Item: Jerry worked for two and one-half hours. How many minutes did Jerry work?

a. 260 minutes
b. 90 minutes
c. 150 minutes
d. 60 minutes

Results

For the statewide sample, 45 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.6.

Specific Skills/Concepts Related to Application of Skills in Solving Arithmetic Word Problems

1.1.8.1 Comprehension of Problem-Solving (Selecting Methods)

The expected criterion level for fourth grade pupils was established as 41 percent. The average percentage of correct items for the fourth grade statewide sample was 39 percent.

1.1.8.2 Comprehension of Problem-Solving (Correct Solution)

The expected criterion level for fourth grade pupils was established as 62 percent. The average percentage of correct items for the fourth grade statewide sample was 60 percent.

1.1.8.3 Analysis of the Components of Arithmetic Word Problems (Organization)

The expected criterion level for fourth grade pupils was established as 42 percent. The average percentage of correct items for the fourth grade statewide sample was 41 percent.

Conclusions--Arithmetic Results

Three areas related to the achievement of Kentucky pupils in arithmetic were assessed statewide at the fourth grade level:

1. Application of arithmetic computation
2. Comprehension of arithmetic concepts
3. Application of skills in solving arithmetic word problems

Application of Arithmetic Computation

The pupil performance data for arithmetic computation did not indicate the existence of a learner need. The results for application in each of the four skills, addition, subtraction, multiplication and division, demonstrate the expected criterion level was attained.

Comprehension of Arithmetic Concepts

The criterion of an average 4.7 grade equivalency was attained. Consequently, no learner need was indicated. However, the assessment results provide evidence of learner needs for the following skills/concepts related to comprehension of arithmetic concepts:

1. Knowledge of arithmetic concepts
2. Comprehension of arithmetic concepts
3. Comprehension of equations
4. Comprehension of comparative relationships
5. Analysis of the components of arithmetic problems (organization)

It is noted that the expected criteria were attained for the related skills/concepts concerning comprehension of relationships (ratio, time, part-whole, sequence, geometric).

Application of Skills in Solving Arithmetic Word Problems

The assessment results for application of skills in solving arithmetic word problems provide evidence of a learner need for fourth grade pupils. Additional supporting data indicating learner needs in this area are documented for the following related skill/concept areas:

1. Comprehension of problem-solving (selecting methods)
2. Comprehension of problem-solving (correct solution)
3. Analysis of the components of arithmetic word problems (organization)

Item analysis data, listed by arithmetic skills/concepts for individual Educational Development Districts, as well as statewide, may be reviewed in Appendix F. Arithmetic results by Educational Development District for arithmetic subtests and individual skills/concepts are provided in a later section of the present report.

Study Skills

Reference Materials

Performance Objective 1.1.9

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of reference material techniques by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Reference Material Techniques

Test Situation: Pupils were asked to read various reference materials and choose the correct answer for questions regarding these materials.

Item: (Review of library cards) The oldest book is listed on

a. card #1
b. card #2
c. card #3
d. none of the cards.

Results

For the statewide sample, 45 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.8.

Specific Skills/Concepts Related to Knowledge of Reference Material Techniques

1.1.9.1 Knowledge of Parts of Books

The expected criterion level for fourth grade pupils was established as 48 percent. The average percentage of correct items for the fourth grade statewide sample was 44 percent.

1.1.9.2 Knowledge of Dictionary Use

The expected criterion level for fourth grade pupils was established as 47 percent. The average percentage of correct items for the fourth grade statewide sample was 45 percent.

1.1.9.3 Knowledge of Library Use

The expected criterion level for fourth grade pupils was established as 48 percent. The average percentage of correct items for the fourth grade statewide sample was 44 percent.

Graphic Materials

Performance Objective 1.1.10

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of graphic materials by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Graphic Materials

Test Situation: Pupils were asked to review various graphic materials and to answer questions related to these materials.

Item: (Review of a map of a specific area) About how far is it from the village to the lake?

a. 3 miles
b. 4 miles
c. 5 miles
d. 6 miles

Results

For the statewide sample, 44 percent of the fourth grade pupils attained the criterion of 4.7 grade equivalency, and the statewide average grade equivalent score was 4.8.

Specific Skills/Concepts Related to Comprehension of Graphic Materials

1.1.10.1 Comprehension of Symbols, Legends, and Data Presented in Graphic or Tabular Form

The expected criterion level for fourth grade pupils was established as 50 percent. The average percentage of correct items for the fourth grade statewide sample was 51 percent.

1.1.10.2 Comprehension of Relationships Presented in Graphic Form

The expected criterion level for fourth grade pupils was established as 53 percent. The average percentage of correct items for the fourth grade statewide sample was 40 percent.

1.1.10.3 Comprehension (Draw Conclusions) of Graphic Data

The expected criterion level for fourth grade pupils was established as 48 percent. The average percentage of correct items for the fourth grade statewide sample was 47 percent.

1.1.10.4 Analysis of Graphic Data to Determine Extended Meaning

The expected criterion level for fourth grade pupils was established as 44 percent. The average percentage of correct items for the fourth grade statewide sample was 40 percent.

Conclusions--Study Skills Results

Two areas related to the achievement of Kentucky pupils in study skills were assessed statewide at the fourth grade level:

1. Knowledge of reference material techniques
2. Comprehension of graphic materials

Knowledge of Reference Material Techniques

The criterion of 4.7 was attained by Kentucky pupils. However, the compiled results indicate that the desired criteria were not met for the related skills/concepts of:

1. knowledge of parts of books.
2. knowledge of dictionary use.
3. knowledge of library use.

Comprehension of Graphic Materials

The pupil performance data for comprehension of graphic materials failed to indicate the existence of a learner need. However, learner needs were found in the failure to attain the specified criteria in the related skills/concepts of:

1. comprehension of symbols, legends, and data presented in graphic and tabular form.
2. comprehension of relationships presented in graphical form.
3. comprehension (draw conclusions) of graphic data.
4. analysis of graphic data to determine extended meaning.

Item analysis data, listed by study skills/concepts for individual Educational Development Districts, as well as statewide, may be reviewed in Appendix F. Study skill results by Educational Development District for study skills subtests and individual skills/concepts are presented in a later section of the present report.

Statewide Profiles--General Education Goals

The assessment results for the basic skill areas are described on the following pages in statewide profiles. Results encompassing the areas of reading, language, arithmetic, and study skills are illustrated.

The following information is provided in Figure 3:

1. Desired criterion level as indicated by the dotted line.
2. Average grade equivalent score attained by the pupil sample as noted by the black dot.
3. Parameters of the major clustering of pupil scores as indicated by the shaded bar.

Due to measurement error, which occurs in any measurement of pupil performance, it is noted that the true average grade equivalent score for the sample group will vary from the reported average grade equivalent score and would be positioned within the limits delineated for each subtest area by the shaded bar representing the major clustering of individual pupil scores.

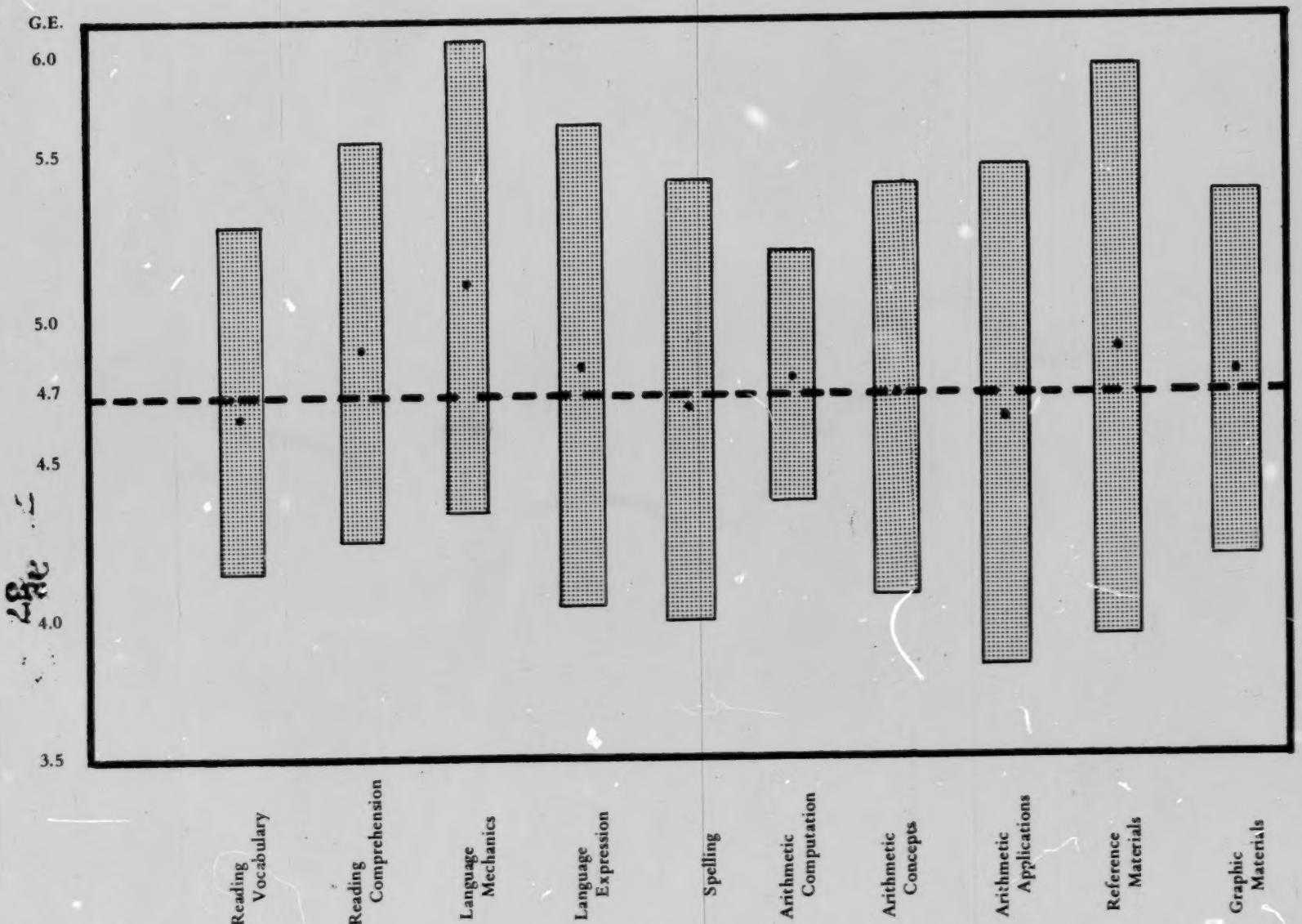

Figure 3

AVERAGE GRADE EQUIVALENT PROFILE AND MEASUREMENT PARAMETERS OF FOURTH GRADE PUPILS,
STATE-WIDE, FOR THE BASIC SKILL AREAS AS MEASURED BY THE
COMPREHENSIVE TESTS OF BASIC SKILLS, FORM Q, LEVEL 2

The percentage of Kentucky pupils meeting the criterion of 4.7, for each subtest, is reported in Figure 4. If the scores of the sample pupil group were normally distributed and had met or exceeded the expected criterion level, then 50 percent or more of the pupils would be expected to score at or above the expected criterion level.

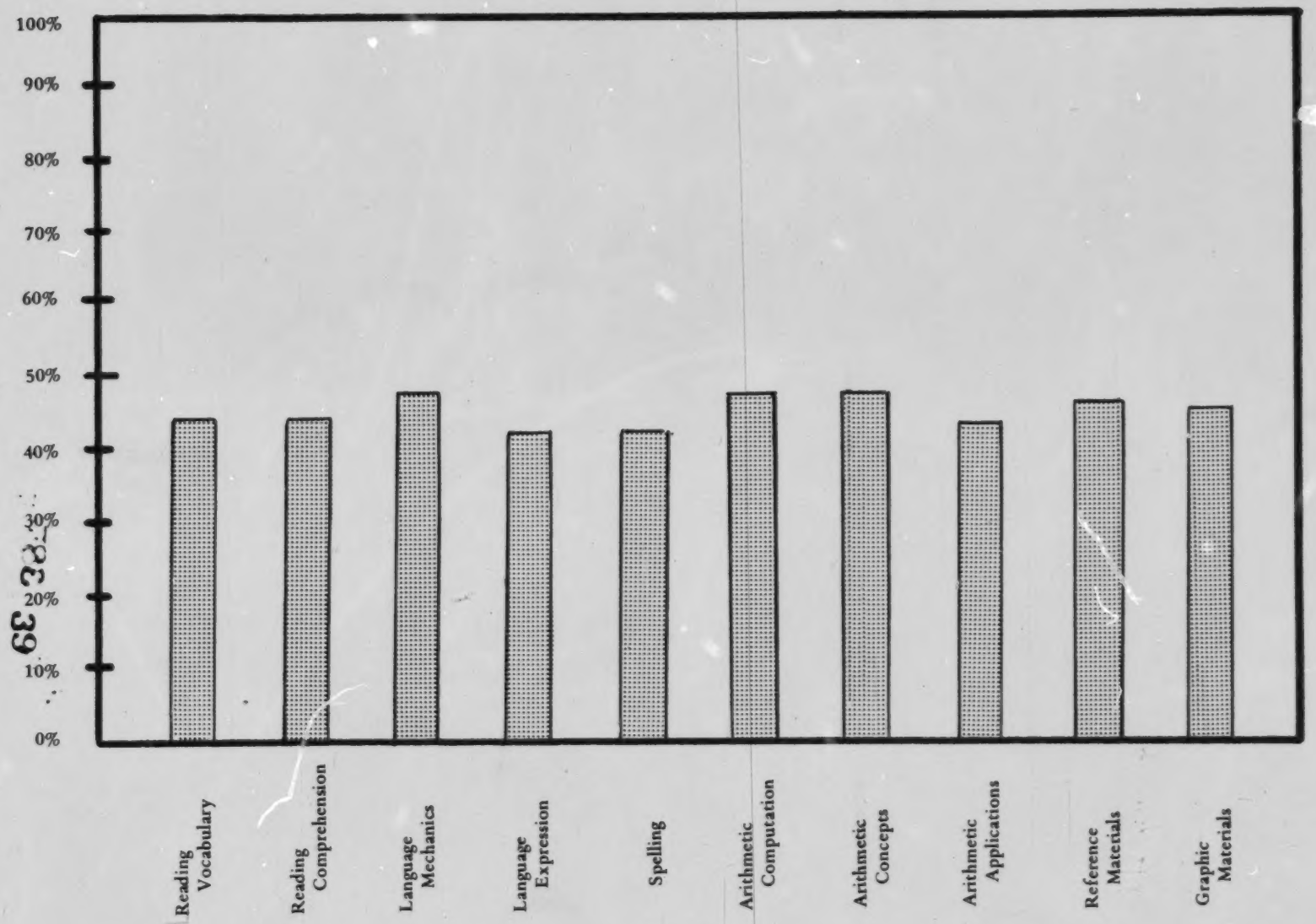

Figure 4

PERCENTAGE PROFILE OF FOURTH GRADE PUPILS, STATEWIDE, MEETING THE CRITERION*
IN THE BASIC SKILL AREAS AS MEASURED BY
THE COMPREHENSIVE TESTS OF BASIC SKILLS, FORM Q, LEVEL 2

*Criterion = 4.7

Goal 1.7: Each citizen of the Commonwealth should be assured an opportunity to develop a positive attitude toward the acquisition of knowledge - both formal and informal.

The assessment of Goal 1.7 involved measurement of affective behavior concerning attitudes toward (1) school, (2) reading and (3) arithmetic. It was determined that affective behavior assessment results compiled from the Kentucky Student Attitude Inventory would be reported in relation to the percentage of fourth grade pupils who responded in the desired manner to individual attitudinal questions. A criterion of 50 percent or greater positive pupil response was established as the level of desired performance. The Kentucky Student Attitude Inventory is provided in Appendix D. The results for Goal 1.7 are presented below.

Attitude toward School

Performance Objective 1.7.1

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward school by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Results

The percentage of fourth grade pupils meeting the criterion as well as the desired directional response is provided for each related item concerning attitude toward school.

Question #1. Do you think school is unfair to students?

Of the pupils in the statewide sample, 78 percent responded positively ("no" response).

Question #2. Is time spent in school important?

Of the pupils in the statewide sample, 89 percent responded positively ("yes" response).

Question #3. Are you proud of your school?

Of the pupils in the statewide sample, 86 percent responded positively ("yes" response).

Question #4. Do you understand the reasons for having school rules?

Of the pupils in the statewide sample, 85 percent responded positively ("yes" response).

Question #5. Do you dislike coming to school?

Of the pupils in the statewide sample, 66 percent responded positively ("no" response).

Question #6. Will your school work help you to do well?

Of the pupils in the statewide sample, 96 percent responded positively ("yes" response).

Question #7. Do you really like what you are taught in school?

Of the pupils in the statewide sample, 75 percent responded positively ("yes" response).

Attitude toward Reading

Performance Objective 1.7.2

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward reading by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Results

The percentage of fourth grade pupils meeting the criterion as well as the desired directional response is provided for each related item concerning attitude toward reading.

Question #1. Do you think that you are a bad reader?

Of the pupils in the statewide sample, 71 percent responded positively ("no" response).

Question #2. Do you like to read before you go to bed?

Of the pupils in the statewide sample, 61 percent responded positively ("yes" response).

Question #3. Is reading your favorite subject in school?

Of the pupils in the statewide sample, 31 percent responded positively ("yes" response).

Question #4. Do you like to read aloud at school?

Of the pupils in the statewide sample, 57 percent responded positively ("yes" response).

Question #5. Do you think there are other things that are more fun than reading?

Of the pupils in the statewide sample, 11 percent responded positively ("no" response).

Question #6. Do you think that reading is important?

Of the pupils in the statewide sample, 94 percent responded positively ("yes" response).

Question #7. When you have some free time, do you like to read a book?

Of the pupils in the statewide sample, 63 percent responded positively ("yes" response).

Attitude toward Arithmetic

Performance Objective 1.7.3

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward arithmetic by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Results

The percentage of fourth grade pupils meeting the criterion as well as the desired directional response is provided for each related item concerning attitude toward arithmetic.

Question #1. Is math boring to you?

Of the pupils in the statewide sample, 66 percent responded positively ("no" response).

Question #2. Is math your favorite subject?

Of the pupils in the statewide sample, 47 percent responded positively ("yes" response).

Question #3. Do you like to work all kinds of math problems?

Of the pupils in the statewide sample, 52 percent responded positively ("yes" response).

Question #4. Do you like to explain math problems?

Of the pupils in the statewide sample, 45 percent responded positively ("yes" response).

Question #5. Do you think math is important?

Of the pupils in the statewide sample, 94 percent responded positively ("yes" response).

Question #6. Would you like to spend more time in math?

Of the pupils in the statewide sample, 46 percent responded positively ("yes" response).

Question #7. Do you think there are other things that are more fun than math?

Of the pupils in the statewide sample, 19 percent responded positively ("no" response).

Conclusions--Attitude toward School, Reading, and Arithmetic

It may be generally concluded that the criteria related to fourth grade pupils' attitudes toward school, reading, and arithmetic were attained.

However, there were individual questions where less than 50 percent of the pupils gave the desired directional response. These questions were as follows:

Reading

Question #3. Is reading your favorite subject in school?

Question #5. Do you think there are other things that are more fun than reading?

Arithmetic

Question #2. Is math your favorite subject?

Question #4. Do you like to explain math problems?

Question #6. Would you like to spend more time in math?

Question #7. Do you think there are other things that are more fun than math?

Appendix F provides the statewide percentages for boys and girls separately who demonstrated the desired directional responses.

A breakdown of the results by Educational Development District is presented in a later section of the present report.

GOAL AREA III: HUMAN RELATIONSHIPS

Goal 3.2: Each citizen of the Commonwealth should have an understanding of the worth and dignity of other people.

The assessment of Goal 3.2 involved measurement of affective behavior concerning attitude toward peers. It was determined that affective behavior assessment results compiled from the Kentucky Student Attitude Inventory would be reported in relation to the percentage of fourth grade pupils who responded in the desired manner to individual attitudinal questions. A criterion of 50 percent or greater positive pupil response was established as the level of desired performance. The Kentucky Student Attitude Inventory is provided in Appendix D. The results for Goal 3.2 are presented below.

Performance Objective 3.2.1

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward peers by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Results

The percentage of fourth grade pupils meeting the criterion as well as the desired directional response is provided for each related item concerning attitude toward peers.

Question #1. Seeing friends at school is fun?

Of the pupils in the statewide sample, 94 percent responded positively ("yes" response).

Question #2. Do students in my school make other students feel unwanted?

Of the pupils in the statewide sample, 50 percent responded positively ("no" response).

Question #3. Do other boys and girls play fair at school?

Of the pupils in the statewide sample, 48 percent responded positively ("yes" response).

Question #4. Do you want to get the same grades as your friends?

Of the pupils in the statewide sample, 29 percent responded positively ("no" response).

Question #5. Do you like to play by yourself at school?

Of the pupils in the statewide sample, 92 percent responded positively ("no" response).

Question #6. Do you like most of your classmates?

Of the pupils in the statewide sample, 93 percent responded positively ("yes" response).

Question #7. Do your friends think that getting good grades is important?

Of the pupils in the statewide sample, 88 percent responded positively ("yes" response).

Conclusions--Attitude toward Peers

It may be generally concluded that the criteria related to fourth grade pupils' attitude toward peers was attained.

However, there were individual questions where less than 50 percent of the pupils gave the desired directional (positive) response. These questions were as follows:

Question #3. Do other boys and girls play fair at school?

Question #4. Do you want to get the same grades as your friends?

GOAL AREA VI: PHYSICAL AND MENTAL WELL BEING

Goal 6.3: Each citizen of the Commonwealth should have a positive and realistic acceptance of self.

The assessment of Goal 6.3 involved measurement of affective behavior concerning attitude toward self. It was determined that affective behavior assessment results compiled from the Kentucky Student Attitude Inventory would be reported in relation to the percentage of fourth grade pupils who responded in the desired manner to individual attitudinal questions. A criterion of 50 percent or greater positive pupil response was established as the level of desired performance. The Kentucky Student Attitude Inventory is provided in Appendix D. The results for Goal 6.3 are presented below.

Performance Objective 6.3.1

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward self by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Results

The percentage of fourth grade pupils meeting the criterion as well as the desired directional response is provided for each related item concerning attitude toward self.

Question #1. Is it easy for you to make friends?

Of the pupils in the statewide sample, 79 percent responded positively ("yes" response).

Question #2. Do you worry about giving the wrong answer in class?

Of the pupils in the statewide sample, 25 percent responded positively ("no" response).

Question #3. Do you get along well with others?

Of the pupils in the statewide sample, 81 percent responded positively ("yes" response).

Question #4. Do you usually feel unhappy?

Of the pupils in the statewide sample, 68 percent responded positively ("no" response).

Question #5. Can you do things as well as other children?

Of the pupils in the statewide sample, 47 percent responded positively ("yes" response).

Question #6. Do you worry about getting good grades?

Of the pupils in the statewide sample, 20 percent responded positively ("no" response).

Question #7. Do you feel that you do a good job of studying?

Of the pupils in the statewide sample, 66 percent responded positively ("yes" response).

Conclusions--Attitude toward Self

It may be generally concluded that the criteria related to fourth grade pupils' attitudes toward self was attained.

However, there were individual questions where less than 50 percent of the pupils gave the desired directional (positive) response. These questions were as follows:

Question #2. Do you worry about giving the wrong answer in class?

Question #5. Can you do things as well as other children?

Question #6. Do you worry about getting good grades?

Statewide Profile--Attitudinal Goals

The assessment results for the attitudinal areas are illustrated in Figure 5 as a statewide profile. The figure indicates the average percentage of Kentucky pupils meeting the criterion of 50 percent positive response.

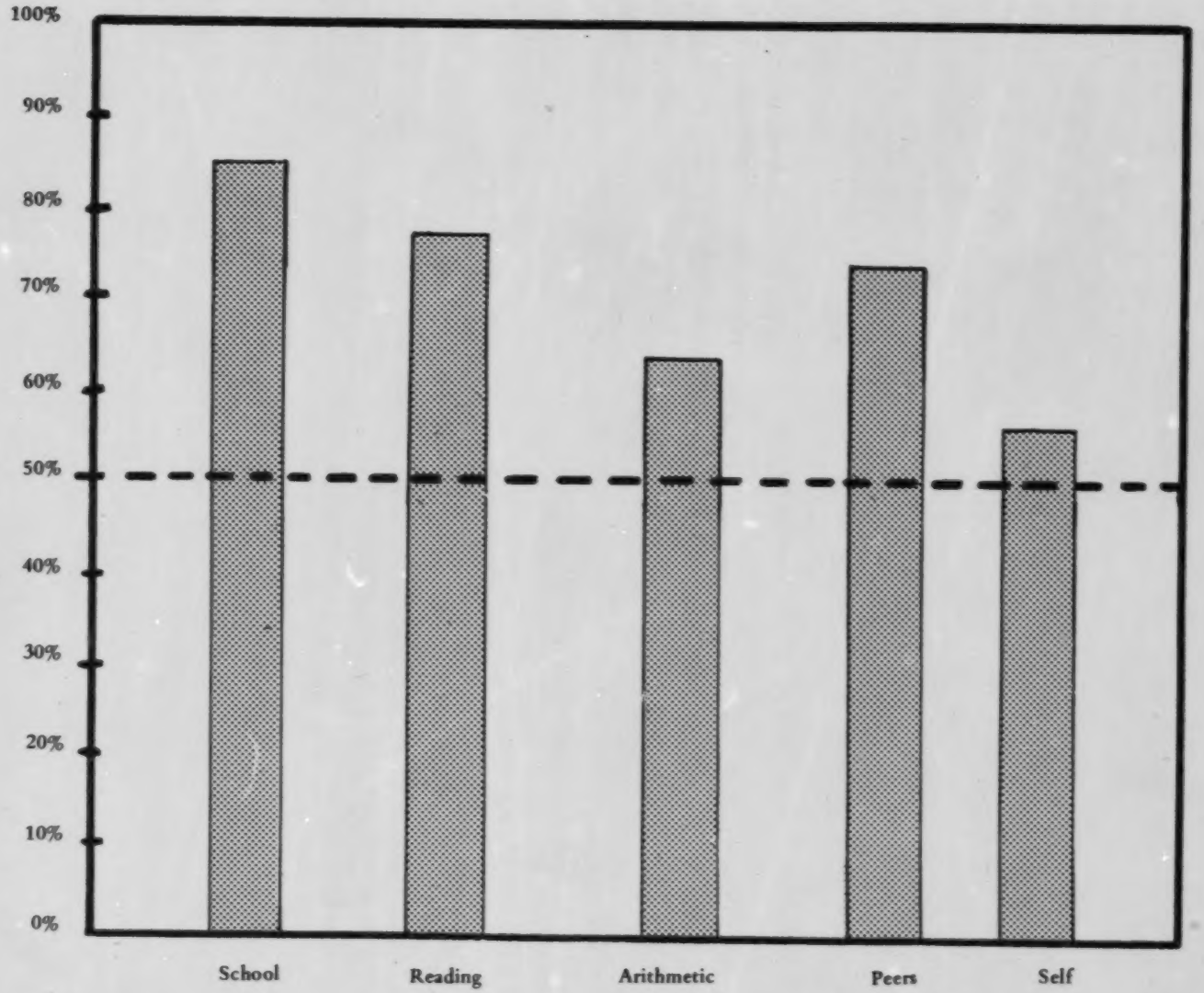

Figure 5

AVERAGE PERCENTAGE PROFILE OF PUPILS, STATEWIDE, MEETING THE CRITERION *
IN ATTITUDINAL AREAS AS MEASURED BY
THE KENTUCKY STUDENT ATTITUDE INVENTORY

*Criterion = 50%

ASSESSMENT RESULTS FOR EDUCATIONAL DEVELOPMENT DISTRICTS

Results for Kentucky pupils by Educational Development Districts are provided in the current section. Actual attainment levels in relation to expected attainment levels are presented for general skill areas and specific skills/concepts by goal area. Sample assessment items are provided for reference to each skill/concept area. Data tables indicating results for boys and girls are presented in Appendix E.

GOAL AREA I: GENERAL EDUCATION

Goal 1.1: Each citizen of the Commonwealth should be assured an opportunity to realize his full potential in written and oral communication, reading, computation, and mathematical concepts.

The first general education goal was assessed in the areas of (1) reading, (2) language, (3) arithmetic, and (4) study skills. The Comprehensive Tests of Basic Skills, Form Q, Level 2, were used. A criterion of 4.7 grade equivalency was established as the desired performance level. Analyses of pupil development for general skill areas and specific skills/concepts for Goal 1.1 are presented below. Item analysis results organized by skill/concept are provided in Appendix F.

Reading

Reading Vocabulary

Performance Objective 1.1.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of vocabulary by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Reading Vocabulary Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Vocabulary

Test Situation: Pupils were asked to choose the word that had a similar meaning to an underlined word in a phrase.

Item: a large dog

a. brown
b. big
c. small
d. old

Results

The average grade equivalent scores for knowledge of vocabulary and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 1 for each Educational Development District.

TABLE 1

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR KNOWLEDGE OF VOCABULARY

Comprehensive Tests of Basic Skills, Form Q, Level 2

Reading Vocabulary Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	389	4.8*	49
2	395	4.4	39
3	136	4.1	28
4	531	4.7*	49
5	339	4.5	32
6	322	4.6	42
7	509	4.8*	49
8	951	5.4*	70
9	276	4.5	40
10	122	4.7*	46
11	295	4.4	47
12	501	4.2	32
13	549	4.2	32
14	309	4.4	39
15	489	4.7*	44
16	161	5.1*	59
Kentucky--Statewide	6,262	4.7*	46

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 1 indicate the existence of learner needs in eight of the sixteen Educational Development Districts. The percentage of pupils attaining the criterion of a grade equivalency of 4.7 ranged from 28 percent to 70 percent.

Item analysis data, listed by reading vocabulary skills/concepts for individual Educational Development Districts, may be reviewed in Appendix F.

Results for boys and for girls for the Reading Vocabulary Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Knowledge of Reading Vocabulary

Performance Objective 1.1.1.1

> During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of the meaning of words in context by attaining an average level of correct answers equal to or exceeding the criterion (57 percent) as measured by the related items of the Reading Vocabulary Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of the Meaning of Words in Context

Test Situation: Pupils were asked to choose the word that had a similar meaning to the underlined word in a phrase.

Item: start the work

a. task
b. begin
c. offer
d. accomplish

Results

The average level of items correct for knowledge of the meaning of words in context for each Educational Development District is provided in Table 2.

TABLE 2

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF THE MEANING OF WORDS IN CONTEXT

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Vocabulary Subtest, Items #1-40

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	56
2	315	54
3	136	46
4	415	56
5	270	54
6	275	53
7	464	55
8	966	64*
9	217	52
10	95	57*
11	106	53
12	475	48
13	498	49
14	234	53
15	332	55
16	163	61*
Kentucky--Statewide	5,235	54

*Criterion average of 57 percent attained.

Conclusion

The assessment results presented in Table 2 indicate the existence of learner needs in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District pupil sample ranged from 46 percent to 64 percent. This range can be compared to an average expected criterion of 57 percent correct answers for items related to knowledge of the meaning of words in context.

Item analysis data for performance objective #1.1.1.1 are provided in Appendix F.

Reading Comprehension

Performance Objective 1.1.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate reading comprehension by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Reading Comprehension

Test Situation: Pupils were asked to read written material and answer questions related to interpreting, translating, summarizing, or paraphrasing the material.

Item: (Story about mountain climbing) In this story, John talks mainly about

a. his ride on the train.
b. climbing in the Swiss Alps.
c. his car.
d. Geneva.

Results

The average grade equivalent scores for reading comprehension and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 3 for each Educational Development District.

TABLE 3

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR READING COMPREHENSION

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	382	5.0*	47
2	388	4.7*	42
3	135	4.2	30
4	531	5.0*	47
5	339	4.6	36
6	323	4.5	40
7	510	4.8*	45
8	458	5.6*	60
9	276	4.7*	40
10	122	4.8*	46
11	295	4.3	35
12	500	4.3	33
13	553	4.2	32
14	309	4.6	44
15	489	4.8*	43
16	161	5.6*	62
Kentucky--Statewide	6,264	4.8*	44

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 3 indicate the existence of learner needs in seven of the sixteen Educational Development Districts. The percentage of pupils attaining the criterion of a grade equivalency of 4.7 ranged from 30 percent to 62 percent.

Item analysis data, listed by reading comprehension skills/concepts for individual Educational Development Districts, may be reviewed in Appendix F.

Results for boys and for girls for the Reading Comprehension Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Reading Comprehension

Performance Objective 1.1.2.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of directly stated details (literal meaning) by attaining an average level of correct answers equal to or exceeding the criterion (52 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Directly Stated Details (Literal Meaning)

Test Situation: Pupils were asked to read given material and answers questions related to a detail directly stated in the material.

Item: (Story about mountain climbing) The mountain John climbed was

a. Mt. Ranier
b. Mount Blonck.
c. the Matterhorn.
d. Pikes Peak.

Results

The average level of items correct for knowledge of directly stated details for each Educational Development District is provided in Table 4.

TABLE 4

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF DIRECTLY STATED DETAILS (LITERAL MEANING)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #12, 17, 33, 40, 44

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	55*
2	315	49
3	136	45
4	415	52*
5	270	47
6	275	49
7	464	49
8	966	57*
9	217	50
10	95	49
11	106	39
12	475	45
13	498	45
14	234	52*
15	332	49
16	163	59*
Kentucky--Statewide	5,235	49

*Criterion average of 52 percent attained

Conclusion

The assessment results presented in Table 4 indicate the existence of learner needs in eleven of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 39 percent to 59 percent. This range can be compared to an average expected criterion of 52 percent correct answers for items related to knowledge of directly stated details.

Item analysis data for performance objective #1.1.2.1 are provided in Appendix F.

Performance Objective 1.1.2.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of words and phrases (simple rewording) by attaining an average level of correct answers equal to or exceeding the criterion (64 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Words and Phrases (Simple Rewording)

Test Situation: Pupils were asked to read written material and answer questions related to the meaning of particular words and phrases.

Item: (Story about the French railroad system)
The word for cable railroad in French is

a. railway cable.
b. Geneva system.
c. telephonieren.
d. telepherique.

Results

The average level of items correct for comprehension of words and phrases (simple rewording) for each Educational Development District is provided in Table 5.

TABLE 5

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF WORDS AND PHRASES (SIMPLE REWORDING)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #7, 9, 15, 19, 27, 29

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	64*
2	315	64*
3	136	50
4	415	61
5	270	57
6	275	58
7	464	59
8	966	72*
9	217	58
10	95	63
11	106	51
12	475	55
13	498	50
14	234	62
15	332	59
16	163	73*
Kentucky--Statewide	5,235	60

*Criterion average of 64 percent attained

Conclusion

The assessment results presented in Table 5 indicate the existence of learner needs in twelve of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 50 percent to 73 percent. This range can be compared to an average expected criterion of 64 percent correct answers for items related to comprehension of words and phrases.

Item analysis data for performance objective #1.1.2.2 are provided in Appendix F.

Performance Objective 1.1.2.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (paraphrasing) of the meaning of ideas by attaining an average level of correct answers equal to or exceeding the criterion (65 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension (Paraphrasing) of the Meaning of Ideas

Test Situation: Pupils were asked to read written material and answer questions requiring paraphrasing of that material.

Item: (Story about mountain climbing) When John reached the top of the mountain, he was

a. nervous and cold.
d. hot and excited.
c. nervous and hot.
d. cold and tired.

Results

The average level of items correct for comprehension (paraphrasing) of the meaning of ideas for each Educational Development District is provided in Table 6.

TABLE 6

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION (PARAPHRASING) OF THE MEANING OF IDEAS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #8, 10, 16, 26, 30

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	63
2	315	64
3	136	56
4	415	63
5	270	57
6	275	59
7	464	59
8	966	72*
9	217	59
10	95	66*
11	106	51
12	475	54
13	498	54
14	234	63
15	332	60
16	163	72*
Kentucky--Statewide	5,235	61

*Criterion average of 65 percent attained

Conclusion

The assessment results presented in Table 6 indicate the existence of learner needs in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 51 percent to 72 percent. This range can be compared to an average expected criterion of 65 percent correct answers for items related to paraphrasing the meaning of ideas.

Item analysis data for performance objective #1.1.2.3 are provided in Appendix F.

Performance Objective 1.1.2.4

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of main ideas by attaining an average level of correct answers equal to or exceeding the criterion (56 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Main Ideas

Test Situation: Pupils were asked to read given material and to answer questions about the main idea of the material.

Item: (Story about mountain climbing) In this story, John talks mainly about

a. his ride on the train.
b. climbing in the Swiss Alps.
c. his car.
d. Geneva.

Results

The average level of items correct for comprehension of main ideas for each Educational Development District is provided in Table 7.

TABLE 7

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF MAIN IDEAS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #5, 11, 13, 22, 31, 34, 37, 45

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	56*
2	315	54
3	136	48
4	415	55
5	270	53
6	275	53
7	464	52
8	966	61*
9	217	52
10	95	54
11	106	46
12	475	49
13	498	49
14	234	52
15	332	54
16	163	63*
Kentucky--Statewide	5,235	53

*Criterion average of 56 percent attained

Conclusion

The assessment results presented in Table 7 indicate that the expected criterion of 56 percent correct answers was attained in three of the sixteen Educational Development Districts. The average percentage of correct responses by Educational Development District for the related items ranged from 46 percent to 63 percent.

Item analysis data for performance objective #1.1.2.4 are provided in Appendix F.

Performance Objective 1.1.2.5

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of relationships by attaining an average level of correct answers equal to or exceeding the criterion (46 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Relationships

Test Situation: Pupils were asked to read written material and answer questions concerning relationships described in the material.

Item: (Story about crabs) Crabs differ from shrimps because

a. crabs have small abdomens.
b. crabs have long antennae.
c. crabs have long legs.
d. crabs have a slender body.

Results

The average level of items correct for comprehension of relationships for each Educational Development District is provided in Table 8.

TABLE 8

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF RELATIONSHIPS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #2, 4, 32, 36, 41, 42

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	45
2	315	44
3	136	36
4	415	46*
5	270	42
6	275	41
7	464	45
8	966	48*
9	217	40
10	95	44
11	106	41
12	475	40
13	498	41
14	234	42
15	332	43
16	163	49*
Kentucky--Statewide	5,235	43

*Criterion average of 46 percent attained

Conclusion

Results related to comprehension of relationships which are presented in Table 8 indicate the existence of learner needs in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 36 percent to 49 percent. This range can be compared to an average expected criterion of 46 percent correct answers for the related items.

Item analysis data for performance objective #1.1.2.5 are provided in Appendix F.

Performance Objective 1.1.2.6

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (draw conclusions) of given facts and statements by attaining an average level of correct answers equal to or exceeding the criterion (46 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension (Draw Conclusions) of Given Facts and Statements

Test Situation: Pupils were asked to read written material and answer questions requiring them to draw conclusions from the material.

Item: (Story about clams) The clam is

a. a shell-plant
b. a shellfish.
c. a fish.
d. a barnacle.

Results

The average level of items correct for comprehension (draw conclusions) of given facts and statements for each Educational Development District is provided in Table 9.

TABLE 9

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION (DRAW CONCLUSIONS) OF GIVEN FACTS AND STATEMENTS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #20, 25, 28, 38, 43

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	47*
2	315	43
3	136	34
4	415	45
5	270	42
6	275	42
7	464	42
8	966	53*
9	217	45
10	95	44
11	106	40
12	475	37
13	498	40
14	234	40
15	332	43
16	163	49*
Kentucky--Statewide	5,235	43

*Criterion average of 46 percent attained

Conclusion

The assessment results presented in Table 9 indicate that the expected criterion of 46 percent correct answers was attained in three of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 34 to 53 percent.

Item analysis data for performance objective #1.1.2.6 are provided in Appendix F.

Performance Objective 1.1.2.7

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (inference) of contextual clues by attaining an average level of correct answers equal to or exceeding the criterion (60 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension (Inference) of Contextual Clues

Test Situation: Pupils were asked to read given material and to answer questions requiring them to make inferences from the contextual clues in the material.

Item: (Story about a mountain climber) John can be described as

a. anxious.
b. daring.
c. strong.
d. friendly

Results

The average level of items correct for comprehension (inference) of contextual clues for each Educational Development District is provided in Table 10.

TABLE 10

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION (INFERENCE) OF CONTEXTUAL CLUES

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #1, 3, 23, 24, 39

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	57
2	315	56
3	136	47
4	415	55
5	270	52
6	275	53
7	464	53
8	966	64*
9	217	53
10	95	53
11	106	53
12	475	50
13	498	48
14	234	53
15	332	53
16	163	63*
Kentucky--Statewide	5,235	54

*Criterion average of 60 percent attained

Conclusion

The assessment results in Table 10 indicate the existence of learner needs in fourteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 47 percent to 64 percent. This range can be compared to an average expected criterion of 60 percent correct answers for items related to comprehension of contextual clues.

Item analysis data for performance objective #1.1.2.7 are provided in Appendix F.

Performance Objective 1.1.2.8

During the spring semester of the fourth grade, Kentucky pupils will demonstrate analysis of indefinite or incomplete statements (extended meaning) by attaining an average level of correct answers equal to or exceeding the criterion (63 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Analysis of Indefinite or Incomplete Statements (Extended Meaning)

Test Situation: Pupils were asked to read written material and to answer questions which required the extension of meanings in the material.

Item: If you were to climb a mountain, you could expect

a. that it will be extremely cold.
b. that it will be extremely hot.
c. that snow will be on the top.
d. that the higher you go, the more trees you will see.

Results

The average level of items correct for analysis of indefinite or incomplete statements (extended meaning) for each Educational Development District is provided in Table 11.

TABLE 11

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' ANALYSIS OF INDEFINITE OR INCOMPLETE STATEMENTS (EXTENDED MEANING)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest, Items #6, 14, 18, 21, 35

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	64*
2	315	63*
3	136	51
4	415	63*
5	270	57
6	275	60
7	464	59
8	966	72*
9	217	58
10	95	64*
11	106	52
12	475	51
13	498	51
14	234	58
15	332	58
16	163	71*
Kentucky--Statewide	5,235	60

*Criterion average of 63 percent attained

Conclusion

The assessment results presented in Table 11 indicate that the expected criterion of 63 percent correct answers was attained in six of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 51 percent to 72 percent.

Item analysis data for performance objective #1.1.2.8 are provided in Appendix F.

Language

Spelling

Performance Objective 1.1.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of spelling by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language/Spelling Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Spelling

Test Situation: Pupils were asked to look at four words and identify the word that was incorrectly spelled or mark "none" if all four words were spelled correctly.

Item:
a. hevy
b. slow
c. dart
d. spoon
d. none

Results

The average grade equivalent scores for knowledge of spelling and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 12 for each Educational Development District.

TABLE 12

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR KNOWLEDGE OF SPELLING

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language/Spelling Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	383	4.7*	51
2	386	4.5	38
3	135	4.2	33
4	526	4.8*	49
5	339	4.7*	42
6	322	4.4	39
7	510	4.9*	54
8	948	5.4*	62
9	276	4.6	32
10	121	4.7*	52
11	295	4.3	37
12	497	4.3	40
13	551	4.1	33
14	310	4.6	42
15	487	4.7*	40
16	63	5.7*	69
Kentucky--Statewide	5,149	4.7*	43

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 12 indicate that the expected criterion of a grade equivalency of 4.7 was attained in eight of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 32 percent to 69 percent.

Item analysis data, listed by skills/concepts for individual Educational Development Districts, are provided in Appendix F.

Results for boys and girls for the Spelling Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Knowledge of Spelling

Performance Objective 1.1.3.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of correctly and incorrectly spelled words by attaining an average level of correct answers equal to or exceeding the criterion (58 percent) as measured by the related items of the Language/Spelling Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Correctly and Incorrectly Spelled Words

Test Situation: Pupils were asked to look at four words and identify the word that was incorrectly spelled or mark "none" if all four words were spelled correctly.

Item:
a. horse
b. speling
c. maybe
d. lucky
e. none

Results

The average level of items correct for knowledge of correctly and incorrectly spelled words for each Educational Development District is provided in Table 13.

TABLE 13

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF CORRECTLY AND INCORRECTLY SPELLED WORDS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language/Spelling Subtest, Items #1-30

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	59*
2	315	57
3	136	47
4	415	58*
5	270	58*
6	275	55
7	464	57
8	966	64*
9	217	56
10	95	56
11	106	51
12	475	52
13	498	51
14	234	57
15	332	57
16	163	35
Kentucky--Statewide	5,235	54

*Criterion average of 58 percent attained

Conclusion

The assessment results presented in Table 13 indicate that the expected criterion of 58 percent correct answers was attained in four of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 35 percent to 64 percent.

Item analysis data for performance objective #1.1.3.1 are provided in Appendix F.

Mechanics of Language

Performance Objective 1.1.4

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of the mechanics of language by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Items for Application of the Mechanics of Language

Test Situation: Pupils were asked to read sentences and to choose the proper punctuation wherever a blank was placed.

Item: The date is Jan ___ 18.

a. comma (,)
b. period (.)
c. question mark (?)
d. quotation marks (")

Test Situation: Pupils were also asked to find the mistakes in capitalization in underlined parts of sentences. If there were no mistakes, "none" was marked.

Item: The story is called (a.) Alice in wonderland (b.) and it is about (c.) the adventures of a little girl named Alice. (d.) None (e.)

Results

The average grade equivalent scores for application of the mechanics of language and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 14 for each Educational Development District.

TABLE 14

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR APPLICATION OF THE MECHANICS OF LANGUAGE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Mechanics Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	382	5.0*	53
2	386	5.0*	49
3	135	4.2	30
4	526	5.2*	48
5	339	5.0*	45
6	323	4.6	35
7	507	5.2*	50
8	954	5.8*	66
9	276	5.2*	52
10	121	5.1*	51
11	295	4.3	49
12	500	4.6	38
13	552	4.4	37
14	308	5.6*	64
15	487	5.0*	46
16	63	6.2*	63
Kentucky--Statewide	6,154	5.1*	49

* Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 14 indicate that the expected criterion of a grade equivalency of 4.7 was attained in eleven of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 35 percent to 66 percent.

Item analysis data, listed by skills/concepts for individual Educational Development Districts, are provided in Appendix F.

Results for boys and girls for the Language Mechanics Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Application of the Mechanics of Language

Performance Objective 1.1.4.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of punctuation skills by attaining an average level of correct answers equal to or exceeding the criterion (63 percent) as measured by the related items of the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Punctuation Skills

Test Situation: Pupils were asked to read sentences and choose the proper punctuation at given points in the sentences.

Item: Did you get the birthday card I sent you___

a. comma (,)
b. period (.)
c. question mark (?)
d. quotation marks (")

Results

The average level of items correct for application of punctuation skills for each Educational Development District is provided in Table 15.

TABLE 15

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF PUNCTUATION SKILLS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Mechanics Subtest, Items #1-13

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	65*
2	315	65*
3	136	48
4	415	62
5	270	62
6	275	60
7	464	60
8	966	67*
9	217	60
10	95	66*
11	106	56
12	475	56
13	498	54
14	234	70*
15	332	61
16	163	36
Kentucky--Statewide	5,235	59

*Criterion average of 63 percent attained

Conclusion

Results related to application of punctuation skills which are presented in Table 15 indicate the existence of learner needs in eleven of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 36 percent to 67 percent. This range can be compared to an average expected criterion of 63 percent correct answers for the related items.

Item analysis data for performance objective #1.1.4.1 are provided in Appendix F.

Performance Objective 1.1.4.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of capitalization skills by attaining an average level of correct answers equal to or exceeding the criterion (40 percent) as measured by the related items of the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Capitalization Skills

Test Situation: Pupils were asked to find the mistakes in capitalization in underlined parts of sentences. "None" was marked if no capitalization errors were present.

Item: My best (a.) friends are (b.) named Jill, (c.) karen, and jean. (d.) None (e.)

Results

The average level of items correct for application of capitalization skills for each Educational Development District is provided in Table 16.

TABLE 16

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF CAPITALIZATION SKILLS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Mechanics Subtest, Items #14-25

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	54*
2	315	48*
3	136	35
4	415	49*
5	270	44*
6	257	42*
7	464	43*
8	966	54*
9	217	47*
10	95	43*
11	106	46*
12	475	39
13	498	43*
14	234	53*
15	332	42*
16	163	31
Kentucky--Statewide	5,235	45*

*Criterion average of 40 percent attained

Conclusion

The assessment results presented in Table 16 indicate that the expected criterion of 40 percent correct answers was attained in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 31 percent to 54 percent.

Item analysis data for performance objective #1.1.4.2 are provided in Appendix F.

Language Expression

Performance Objective I.1.5

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of language expression by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Language Expression

Test Situation: Pupils were asked to choose the best word or phrase to fill a blank in a sentence, story, or poem.

Item: We ____ now going to the movie.

a. was
b. are
c. am
d. is

Results

The average grade equivalent scores for application of language expression and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 17 for each Educational Development District.

TABLE 17

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR APPLICATION OF LANGUAGE EXPRESSION

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Expression Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	383	5.0*	47
2	387	4.6	44
3	135	3.9	29
4	527	5.0*	50
5	339	4.8*	44
6	322	4.4	36
7	506	5.0*	49
8	951	5.7*	68
9	276	4.5	36
10	121	4.9*	45
11	296	4.5	36
12	500	4.3	35
13	544	4.0	29
14	390	4.6	41
15	486	4.8*	47
16	63	6.1*	67
Kentucky--Statewide	6,145	4.8*	46

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 17 indicate that the expected criterion of a grade equivalency of 4.7 was attained in eight of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 29 percent to 68 percent.

Item analysis data, listed by skills/concepts for individual Educational Development Districts, are provided in Appendix F.

Results for boys and girls for the Language Expression Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Application of Language Expression

Performance Objective 1.1.5.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of correct grammatical usage by attaining an average level of correct answers equal to or exceeding the criterion (61 percent) as measured by the related items of the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Correct Grammatical Usage

Test Situation: Pupils were asked to choose the best words to fill a blank in a sentence.

Item: Do you want me to put the ball on _____ desk?

a. your
b. there
c. this here
d. you're

Results

The average level of items correct for application of correct grammatical usage for each Educational Development District is provided in Table 18.

TABLE 18

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF CORRECT GRAMMATICAL USAGE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Expression Subtest, Items #26-35

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	60
2	315	58
3	136	50
4	415	57
5	270	59
6	257	57
7	464	57
8	966	63*
9	217	54
10	95	60
11	106	52
12	475	52
13	498	51
14	234	57
15	332	55
16	163	32
Kentucky--Statewide	5,235	54

*Criterion average of 61 percent attained

Conclusion

Results related to application of correct grammatical usage which are presented in Table 18 indicate the existence of learner needs in fifteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 32 percent to 63 percent. This range can be compared to an average expected criterion of 61 percent correct answers for the related items.

Item analysis data for performance objective #1.1.5.1 are provided in Appendix F.

Performance Objective 1.1.5.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of clarity and/or economy of expression by attaining an average level of correct answers equal to or exceeding the criterion (35 percent) as measured by the related items of the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Clarity and/or Economy of Expression

Test Situation: Pupils were asked to choose the best word or phrase to replace an underlined section of a story. Pupils also had the opportunity to indicate that the phrase or statement was "best as it is."

Item: She put aside the book from which she had been reading.

a. out of which she had read
b. from out of which she had been reading
c. out of which she had been reading out of
d. Best as it is.

Results

The average level of items correct for comprehension of clarity and/or economy of expression for each Educational Development District is provided in Table 19.

TABLE 19

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF CLARITY AND/OR ECONOMY OF EXPRESSION

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Expression Subtest, Items #51-55

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	37*
2	315	36*
3	136	28
4	415	38*
5	270	36*
6	257	34
7	464	35*
8	966	39*
9	217	33
10	95	38*
11	106	37*
12	475	35*
13	498	32
14	234	34
15	332	36*
16	163	21
Kentucky--Statewide	5,235	34

*Criterion average of 35 percent attained

Conclusion

The assessment results presented in Table 19 indicate that the expected criterion of 35 percent correct answers was attained in ten of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 21 percent to 39 percent.

Item analysis data for performance objective #1.1.5.2 are provided in Appendix F.

Performance Objective 1.1.5.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of the author's implication (word choice) by attaining an average level of correct answers equal to or exceeding the criterion (55 percent) as measured by the related items of the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of the Author's Implication (Word Choice)

Test Situation: Pupils were asked to choose the best word or phrase to fill the blank in a statement.

Item: The angry woman _____ the rock at the dog.

a. hurled
b. chucked
c. dropped
d. flipped

Results

The average level of items correct for comprehension of the author's implication (word choice) for each Educational Development District is provided in Table 20.

TABLE 20

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF THE AUTHOR'S IMPLICATION (WORD CHOICE)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Expression Subtest, Items #26-50

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	55*
2	315	55*
3	136	42
4	415	56*
5	270	52
6	257	51
7	464	52
8	966	63*
9	217	49
10	95	54
11	106	50
12	475	48
13	498	47
14	234	53
15	332	51
16	163	35
Kentucky--Statewide	5,235	51

*Criterion average of 55 percent attained

Conclusion

The assessment results presented in Table 20 indicate the existence of learner needs in twelve of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 35 percent to 63 percent. This range can be compared to an average expected criterion of 55 percent correct answers for items related to comprehension of the author's intention.

Item analysis data for performance objective #1.1.5.3 are provided in Appendix F.

Arithmetic

Arithmetic Computation

Performance Objective 1.1.6

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of arithmetic computation by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Arithmetic Computation

Test Situation: Pupils were asked to choose correct answers to problems of addition, subtraction, multiplication, and division.

Item:
$$\begin{array}{r} 221 \\ \times\ 3 \\ \hline \end{array}$$

a. 278
b. 224
c. 663
d. 673

Results

The average grade equivalent scores for application of arithmetic computation and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 21 for each Educational Development District.

TABLE 21

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR APPLICATION OF ARITHMETIC COMPUTATION

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	379	4.7*	42
2	392	4.7*	46
3	135	4.3	28
4	527	4.8*	50
5	339	4.7*	44
6	324	4.5	35
7	510	4.9*	49
8	954	5.1*	76
9	276	4.6	43
10	122	4.7*	43
11	294	4.6	40
12	495	4.5	42
13	548	4.4	35
14	308	4.9*	51
15	279	4.8*	43
16	157	5.1*	54
Kentucky--Statewide	6,249	4.7*	47

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 21 indicate that the expected criterion of a grade equivalency of 4.7 was attained in ten of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 28 percent to 76 percent.

Item analysis data, listed by skills/concepts for individual Educational Development Districts, are provided in Appendix F.

Results for boys and girls for the Arithmetic Computation Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Application of Arithmetic Computation

Performance Objective 1.1.6.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of addition skills by attaining an average level of correct answers equal to or exceeding the criterion (64 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Addition Skills

Test Situation: Pupils were asked to add a given arithmetic problem and to choose the correct answer to that problem.

Item:
$$\begin{array}{r} 641 \\ +229 \\ \hline \end{array}$$

a. 347
b. 870
c. 265
d. 862

Results

The average level of items correct for application of addition skills for each Educational Development District is provided in Table 22.

TABLE 22

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF ADDITION SKILLS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest, Items #1-4, 17-20, 33-36

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	66*
2	315	67*
3	136	58
4	415	66*
5	270	64*
6	257	66*
7	464	64*
8	966	68*
9	217	64*
10	95	64*
11	106	60
12	475	61
13	498	60
14	234	67*
15	332	65*
16	163	65*
Kentucky--Statewide	5,235	64*

*Criterion average of 64 percent attained

Conclusion

The assessment results presented in Table 22 indicate that the expected criterion of 64 percent correct answers was attained in twelve of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 58 percent to 68 percent.

Item analysis data for performance objective #1.1.6.1 are provided in Appendix F.

Performance Objective 1.1.6.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of subtraction skills by attaining an average level of correct answers equal to or exceeding the criterion (62 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Subtraction Skills

Test Situation: Pupils were asked to subtract a given arithmetic problem and to choose the correct answer.

Item:

$$\begin{array}{r} 648 \\ -106 \\ \hline \end{array}$$

a. 553
b. 542
c. 742
d. 753

Results

The average level of items correct for application of subtraction skills for each Educational Development District is provided in Table 23.

TABLE 23

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF SUBTRACTION SKILLS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest, Items #5-8, 21-24, 37-40

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	66*
2	315	65*
3	136	52
4	415	63*
5	270	60
6	257	64*
7	464	62*
8	966	69*
9	217	61
10	95	67*
11	106	55
12	475	56
13	498	56
14	234	66*
15	332	62*
16	163	66*
Kentucky--Statewide	5,235	62*

*Criterion average of 62 percent attained

Conclusion

The assessment results presented in Table 23 indicate that the expected criterion of 62 percent correct answers was attained in ten of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 52 percent to 69 percent.

Item analysis data for performance objective #1.1.6.2 are provided in Appendix F.

Performance Objective 1.1.6.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of multiplication skills by attaining an average level of correct answers equal to or exceeding the criterion (54 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Multiplication Skills

Test Situation: Pupils were asked to multiply a given arithmetic problem and to choose the correct answer to that problem.

Item: 3,057
x 5

a. 18,013
b. 15,064
c. 15,182
d. 15,285

Results

The average level of items correct for application of multiplication skills for each Educational Development District is provided in Table 24.

TABLE 24

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF MULTIPLICATION SKILLS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest, Items #9-12, 25-28, 41-44

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	60*
2	315	58*
3	136	47
4	415	58*
5	270	54*
6	257	55*
7	464	57*
8	966	64*
9	217	57*
10	95	57*
11	106	48
12	475	52
13	498	50
14	234	60*
15	332	55*
16	163	58*
Kentucky--Statewide	5,235	56*

*Criterion average of 54 percent attained

Conclusion

The assessment results presented in Table 24 indicate that the expected criterion of 54 percent correct answers was attained in twelve of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 47 percent to 64 percent.

Item analysis data for performance objective #1.1.6.3 are provided in Appendix F.

Performance Objective 1.1.6.4

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of division skills by attaining an average level of correct answers equal to or exceeding the criterion (53 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Division Skills

Test Situation: Pupils were asked to divide a given arithmetic problem and to choose the correct answer to that problem.

Item: $4\overline{)16.00}$

a. 4.00
b. 44.00
c. 14.00
d. 4.44

Results

The average level of items correct for application of division skills for each Educational Development District is provided in Table 25.

TABLE 25

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' APPLICATION OF DIVISION SKILLS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest, Items #13-16, 29-32, 45-48

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	59*
2	315	58*
3	136	43
4	415	58*
5	270	54*
6	257	53*
7	464	54*
8	966	60*
9	217	55*
10	95	57*
11	106	48
12	475	50
13	498	51
14	234	59*
15	332	52
16	163	58*
Kentucky--Statewide	5,235	54*

*Criterion average of 53 percent attained

Conclusion

The assessment results presented in Table 25 indicate that the expected criterion of 53 percent correct answers was attained in eleven of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 43 percent to 60 percent.

Item analysis data for performance objective #1.1.6.4 are provided in Appendix F.

Arithmetic Concepts

Performance Objective 1.1.7

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of arithmetic concepts by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Arithmetic Concepts

Test Situation: Pupils were asked to choose the correct answer for questions relating to various arithmetic concepts.

Item: Three thousand four is the same as

a. 3,004
b. 304
c. 3,040
d. 34,000

Results

The average grade equivalent scores for comprehension of arithmetic concepts and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 26 for each Educational Development District.

TABLE 26

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR COMPREHENSION OF ARITHMETIC CONCEPTS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	378	4.6	42
2	388	4.5	44
3	135	3.8	20
4	527	4.7*	45
5	340	4.7*	45
6	324	4.4	34
7	508	5.1*	58
8	945	5.4*	68
9	276	4.6	42
10	122	4.7*	56
11	294	4.6	40
12	498	4.3	37
13	546	4.2	35
14	310	4.7*	47
15	485	4.6	43
16	157	5.1*	62
Kentucky--Statewide	6,233	4.7*	47

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 26 indicate that the expected criterion of a grade equivalency of 4.7 was attained in seven of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 20 percent to 68 percent.

Item analysis data, listed by skills/concepts for individual Educational Development Districts, are provided in Appendix F.

Results for boys and girls for the Arithmetic Concepts Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Comprehension of Arithmetic Concepts

Performance Objective 1.1.7.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of arithmetic concepts by attaining an average level of correct answers equal to or exceeding the criterion (53 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Arithmetic Concepts

Test Situation: Pupils were asked to choose the correct answer for questions relating to specific arithmetic concepts.

Item: The numeral 9 in 129 stands for

a. 9 ones
b. 9 tens
c. 29 ones
d. 29 tens

Results

The average level of items correct for knowledge of arithmetic concepts for each Educational Development District is provided in Table 27.

TABLE 27

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF ARITHMETIC CONCEPTS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest, Items #2, 9, 11, 14, 20, 27

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	50
2	315	51
3	136	34
4	415	48
5	270	46
6	257	47
7	464	54*
8	966	57*
9	217	47
10	95	51
11	106	50
12	475	44
13	498	43
14	234	48
15	332	49
16	163	52
Kentucky--Statewide	5,235	48

*Criterion average of 53 percent attained

Conclusion

The assessment results presented in Table 27 indicate the existence of learner needs in fourteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 34 percent to 57 percent. This range can be compared to an average expected criterion of 53 percent correct answers for items related to knowledge of arithmetic concepts.

Item analysis data for performance objective #1.1.7.1 are provided in Appendix F.

Performance Objective 1.1.7.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of arithmetic concepts (converting form) by attaining an average level of correct answers equal to or exceeding the criterion (57 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Arithmetic Concepts (Converting Form)

Test Situation: Pupils were asked to choose the correct answer for questions related to converting the form of numerals given.

Item: If John has 2 quarters and Greg has 4 dimes, how much money do they have?

a. $0.60
b. $1.90
c. $0.90
d. $1.05

Results

The average level of items correct for comprehension of arithmetic concepts (converting form) for each Educational Development District is provided in Table 28.

TABLE 28

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF ARITHMETIC CONCEPTS (CONVERTING FORM)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest, Items #1, 6, 29, 30

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	56
2	315	57*
3	136	46
4	415	56
5	270	55
6	257	55
7	464	56
8	966	62*
9	217	57*
10	95	58*
11	106	61*
12	475	53
13	498	53
14	234	60*
15	332	55
16	163	60*
Kentucky--Statewide	5,235	56

*Criterion average of 57 percent attained

Conclusion

The assessment results presented in Table 28 indicate that the expected criterion of 57 percent correct answers was attained in seven of the sixteen Educational Development Districts. The average percentage of correct response by Educational Development District for the related items ranged from 46 percent to 62 percent.

Item analysis data for performance objective #1.1.7.2 are provided in Appendix F.

Performance Objective 1.1.7.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of equations by attaining an average level of correct answers equal to or exceeding the criterion (66 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Equations

Test Situation: Pupils were asked to choose the correct answer to arithmetic equations.

Item: If n x 6 = 4 x 3, then n is equal to

a. 5
b. 2
c. 1
d. 4

Results

The average level of items correct for comprehension of equations for each Educational Development District is provided in Table 29.

TABLE 29

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF EQUATIONS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest, Items #5, 10, 13, 15

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	64
2	315	66*
3	136	56
4	415	67*
5	270	64
6	257	67*
7	464	69*
8	966	73*
9	217	64
10	95	72*
11	106	57
12	475	59
13	498	59
14	234	67*
15	332	60
16	163	71*
Kentucky--Statewide	5,235	65

*Criterion average of 66 percent attained

Conclusion

The assessment results presented in Table 29 indicate the existence of learner needs in eight of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 56 percent to 73 percent. This range can be compared to an average expected criterion of 66 percent correct answers for items related to comprehension of equations.

Item analysis data for performance objective #1.1.7.3 are provided in Appendix F.

Performance Objective 1.1.7.4

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of comparative relationships by attaining an average level of correct answers equal to or exceeding the criterion (56 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Comparative Relationships

Test Situation: Pupils were asked to choose the correct answer to questions relating to arithmetic comparative relationships.

Item: Which has the largest value?

a. $4.12
b. $6.75
c. $3.15
d. $6.72

Results

The average level of items correct for comprehension of comparative relationships for each Educational Development District is provided in Table 30.

TABLE 30

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF COMPARATIVE RELATIONSHIPS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest, Items #4, 7, 8, 17, 23

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	56*
2	315	56*
3	136	44
4	415	56*
5	270	54
6	257	53
7	464	57*
8	966	60*
9	217	53
10	95	52
11	106	51
12	475	50
13	498	48
14	234	59*
15	332	55
16	163	58*
Kentucky--Statewide	5,235	54

*Criterion average of 56 percent attained

Conclusion

The assessment results presented in Table 30 indicate that the expected criterion of 56 percent correct answers was attained in seven of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 44 percent to 60 percent.

Item analysis data for performance objective #1.1.7.4 are provided in Appendix F.

Performance Objective 1.1.7.5

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of relationships (ratio, time, part-whole, sequence, geometric) by attaining an average level of correct answers equal to or exceeding the criterion (54 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Relationships (Ratio, Time, Part-Whole, Sequence, Geometric)

Test Situation: Pupils were asked to choose the correct answers to questions dealing with the arithmetic concepts of ratio, time, parts, sequences, and geometry.

Item: What should be the next two in this series:
61, 63, 65, 67, __, __

a. 68, 71
b. 68, 69
c. 69, 71
d. 69, 72

Results

The average level of items correct for comprehension of relationships (ratio, time, part-whole, sequence, geometric) for each Educational Development District is provided in Table 31.

TABLE 31

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF RELATIONSHIPS (RATIO, TIME, PART-WHOLE, SEQUENCE, GEOMETRIC)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest, Items #3, 12, 18, 19, 25, 26

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	56*
2	315	60*
3	136	48
4	415	59*
5	270	59*
6	257	56*
7	464	61*
8	966	72*
9	217	56*
10	95	58*
11	106	53
12	475	54*
13	498	51
14	234	65*
15	332	54*
16	163	65*
Kentucky--Statewide	5,235	58*

*Criterion average of 54 percent attained

Conclusion

The assessment results presented in Table 31 indicate that the expected criterion of 54 percent correct answers was attained in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 48 percent to 72 percent.

Item analysis data for performance objective #1.1.7.5 are provided in Appendix F.

Performance Objective 1.1.7.6

During the spring semester of the fourth grade, Kentucky pupils will demonstrate analysis of the components of arithmetic problems (organization) by attaining an average level of correct answers equal to or exceeding the criterion (44 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Analysis of the Components of Arithmetic Problems (Organization)

Test Situation: Pupils were asked to choose the correct answers to questions relating to the concept of arithmetic organization.

Item: What time will it be in 9 hours after 9:15 p.m.?

a. 6:15 a.m.
b. 6:15 p.m.
c. 1:15 a.m.
d. 1:15 p.m.

Results

The average level of items correct for analysis of the components of arithmetic problems (organization) for each Educational Development District is provided in Table 32.

TABLE 32

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' ANALYSIS OF THE COMPONENTS OF ARITHMETIC WORD PROBLEMS (ORGANIZATION)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest, Items #16, 21, 22, 24, 28

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	42
2	315	44*
3	136	31
4	415	45*
5	270	42
6	257	42
7	464	47*
8	966	52*
9	217	45*
10	95	44*
11	106	38
12	475	38
13	498	40
14	234	44*
15	332	44*
16	163	49*
Kentucky--Statewide	5,235	43

*Criterion average of 44 percent attained

Conclusion

The assessment results presented in Table 32 indicate that the expected criterion of 44 percent correct answers was attained in nine of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 31 percent to 52 percent.

Item analysis data for performance objective #1.1.7.6 are provided in Appendix F.

Arithmetic Applications

Performance Objective 1.1.8

During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of skills in solving arithmetic word problems by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Application of Skills in Solving Arithmetic Word Problems

Test Situation: Pupils were asked to read an arithmetic word problem and to choose the correct solution for that problem.

Item: Jerry worked for two and one-half hours. How many minutes did he work?

a. 260 minutes
b. 90 minutes
c. 150 minutes
d. 60 minutes

Results

The average grade equivalent scores for application of skills in solving word problems and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 33 for each Educational Development District.

TABLE 33

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR APPLICATION OF SKILLS IN SOLVING ARITHMETIC WORD PROBLEMS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Application Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	377	4.5	38
2	388	4.4	41
3	135	3.8	22
4	525	4.6	43
5	339	4.5	41
6	323	4.4	34
7	505	4.9*	51
8	944	5.2*	60
9	276	4.5	43
10	120	4.5	45
11	294	4.5	42
12	495	4.4	34
13	545	4.3	36
14	310	4.6	46
15	485	4.5	41
16	162	5.1*	59
Kentucky--Statewide	6,223	4.6	45

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 33 indicate the existence of learner needs in thirteen of the sixteen Educational Development Districts. The percentage of pupils attaining the criterion of a grade equivalency of 4.7 ranged from 22 percent to 60 percent.

Item analysis data, listed by specific skills/concepts for individual Educational Development Districts may be reviewed in Appendix F.

Results for boys and for girls for the Arithmetic Application Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Application of Skills in Solving Arithmetic Word Problems

Performance Objective 1.1.8.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of problem-solving (selecting methods) by attaining an average level of correct answers equal to or exceeding the criterion (42 percent) as measured by the related items of the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Problem-Solving (Selecting Methods)

Test Situation: Pupils were asked to read arithmetic word problems and to choose the best method for solving the problem.

Item: A playground is 9 yards wide. To find out how many feet wide the playground is, you can

a. multiply 9 by 3
b. divide 9 by 3
c. subtract 3 from 9
d. add 9 plus 3

Results

The average level of items correct for comprehension of problem-solving (selecting methods) for each Educational Development District is provided in Table 34.

TABLE 34

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF PROBLEM-SOLVING (SELECTING METHODS)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Applications Subtest, Items #37, 40, 42, 43, 49, 50

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	39
2	315	40
3	136	32
4	415	39
5	270	36
6	257	39
7	464	41*
8	966	46*
9	217	38
10	95	40
11	106	37
12	475	37
13	498	37
14	234	41*
15	332	36
16	163	45*
Kentucky--Statewide	5,235	39

*Criterion average of 41 percent attained

Conclusion

The assessment results presented in Table 34 indicate that the expected criterion of 41 percent correct answers was attained in four of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 32 percent to 46 percent.

Item analysis data for performance objective #1.1.8.1 are provided in Appendix F.

Performance Objective 1.1.8.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of problem-solving (correct solution) by attaining an average level of correct answers equal to or exceeding the criterion (62 percent) as measured by the related items of the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Problem-Solving (Correct Solution)

Test Situation: Pupils were asked to solve arithmetic word problems and to choose the correct answer from a list of alternatives.

Item: Kim had 4 dolls. Pam had 3 times as many. How many dolls did Pam have?

a. 2
b. 16
c. 12
d. 7

Results

The average level of items correct for comprehension of problem-solving (correct solution) for each Educational Development District is provided in Table 35.

TABLE 35

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF PROBLEM-SOLVING (CORRECT SOLUTION)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Application Subtest, Items #31, 32, 34-36, 39, 46

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	59
2	315	63*
3	136	44
4	415	62*
5	270	57
6	257	59
7	464	64*
8	966	69*
9	217	59
10	95	58
11	106	56
12	475	57
13	498	55
14	234	65*
15	332	58
16	163	70*
Kentucky--Statewide	5,235	60

*Criterion average of 62 percent attained

Conclusion

The assessment results presented in Table 35 indicate the existence of learner needs in ten of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 44 percent to 70 percent. This range can be compared to an average expected criterion of 62 percent correct answers for items related to comprehension of the correct solution for problem-solving.

Item analysis data for performance objective #1.1.8.2 are provided in Appendix F.

Performance Objective 1.1.8.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate analysis of the components of arithmetic word problems (organization) by attaining an average level of correct answers equal to or exceeding the criterion (42 percent) as measured by the related items of the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Analysis of the Components of Arithmetic Word Problems (Organization)

Test Situation: Pupils were asked to read arithmetic word problems relating to organization and to choose the correct answer to that problem.

Item: Apples are 8 for 84¢. How much will 24 apples cost?

a. $2.52
b. $2.75
c. $1.52
d. $2.12

Results

The average level of items correct for analysis of the components of arithmetic word problems (organization) for each Educational Development District is provided in Table 36.

TABLE 36

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' ANALYSIS OF THE COMPONENTS OF ARITHMETIC WORD PROBLEMS (ORGANIZATION)

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Application Subtest, Items #33, 38, 41, 44, 45, 48

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	43
2	315	39
3	136	33
4	415	42*
5	270	41
6	257	42*
7	464	44*
8	966	46*
9	217	42*
10	95	41
11	106	41
12	475	38
13	498	37
14	234	41
15	332	41
16	163	49*
Kentucky--Statewide	5,235	41

*Criterion average of 42 percent attained

Conclusion

The assessment results presented in Table 36 indicate the existence of learner needs in ten of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 33 percent to 49 percent. This range can be compared to an average expected criterion of 42 percent correct answers for items related to analysis of the components of arithmetic word problems.

Item analysis data for performance objective #1.1.8.3 are provided in Appendix F.

Study Skills

Reference Materials

Performance Objective 1.1.9

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of reference material techniques by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Reference Material Techniques

Test Situation: Pupils were asked to read various reference materials and choose the correct answer for questions regarding these materials.

Item: (Review library cards) The oldest book is listed on

a. card 1.
b. card 2.
c. card 3.
d. cannot tell

Results

The average grade equivalent scores for knowledge of reference material techniques and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 37 for each Educational Development District.

TABLE 37

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR KNOWLEDGE OF REFERENCE MATERIAL TECHNIQUES

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Reference Materials Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	380	4.8*	48
2	377	4.8*	49
3	136	4.3	35
4	523	4.9*	49
5	340	4.7*	46
6	324	4.6	38
7	502	5.0*	48
8	947	5.6*	65
9	275	4.9*	50
10	120	4.9*	58
11	293	4.6	44
12	494	4.3	35
13	547	4.2	32
14	300	4.9*	50
15	486	4.8*	49
16	64	5.3*	63
Kentucky--Statewide	6,108	4.8*	45

*Criterion score of 4.7 attained

Conclusion

The assessment results presented in Table 37 indicate that the expected criterion of a grade equivalency of 4.7 was attained in eleven of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 32 percent to 65 percent.

Item analysis data, listed by skills/concepts for individual Educational Districts, are provided in Appendix F.

Results for boys and girls for the Reference Materials Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Knowledge of Reference Material Techniques

Test Situation: Pupils were asked to choose the correct answer to questions relating to parts of a book.

Item: In which part of a book would you find the title of Chapter V?

a. table of contents
b. glossary
c. index
d. title page

Results

The average level of items correct for knowledge of parts of books for each Educational Development District is provided in Table 38.

TABLE 38

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF PARTS OF BOOKS

Comprehensive Test of Basic Skills, Form Q, Level 2
Study Skills/Reference Materials Subtest, Items #12-16

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	49*
2	315	47
3	136	41
4	415	45
5	270	48*
6	257	46
7	464	46
8	966	52*
9	217	43
10	95	46
11	106	45
12	475	42
13	498	39
14	234	45
15	332	45
16	163	26
Kentucky--Statewide	5,235	44

*Criterion average of 48 percent attained

Conclusion

The assessment results presented in Table 38 indicate the existence of learner needs in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 26 percent to 52 percent. This range can be compared to an average expected criterion of 48 percent correct answers for items related to knowledge of parts of books.

Item analysis data for performance objective #1.1.9.1 are provided in Appendix F.

Performance Objective 1.1.9.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of dictionary use by attaining an average level of correct answers equal to or exceeding the criterion (47 percent) as measured by the related items of the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Dictionary Use

Test Situation: Pupils were asked to choose the correct answers to questions dealing with the use of a dictionary.

Item: The words LATE-LAUGH appear at the top of a dictionary page. Which of the following words would you find on that page?

a. last
b. lamp
c. lather
d. launch

Results

The average level of items correct for knowledge of dictionary use for each Educational Development District is provided in Table 39.

TABLE 39

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF DICTIONARY USE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Reference Materials Subtest, Items #7, 8, 17-20

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	47*
2	315	48*
3	136	40
4	415	50*
5	270	47*
6	257	45
7	464	47*
8	966	56*
9	217	49*
10	95	49*
11	106	40
12	475	43
13	498	45
14	234	49*
15	332	44
16	163	27
Kentucky--Statewide	5,235	45

*Criterion average of 47 percent attained

Conclusion

The assessment results presented in Table 39 indicate that the expected criterion of 47 percent correct answers was attained in nine of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 27 percent to 56 percent.

Item analysis data for performance objective #1.1.9.2 are provided in Appendix F.

Performance Objective 1.1.9.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of library use by attaining an average level of correct answers equal to or exceeding the criterion (48 percent) as measured by the related items of the Study Skills/ Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Knowledge of Library Use

Test Situation: Pupils were asked to choose the correct answer to questions relating to the use of a library.

Item: Which is the best reference book to use if you want to know how cotton is grown?

a. atlas
b. encyclopedia
c. dictionary
d. almanac

Results

The average level of items correct for knowledge of library use for each Educational Development District is provided in Table 40.

TABLE 40

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' KNOWLEDGE OF LIBRARY USE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Reference Materials Subtest, Items #1-6, 9-11

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	46
2	315	47
3	136	41
4	415	48*
5	270	44
6	257	47
7	464	45
8	966	51*
9	217	46
10	95	51*
11	106	47
12	475	39
13	498	39
14	234	47
15	332	44
16	163	26
Kentucky--Statewide	5,235	44

*Criterion average of 48 percent attained

Conclusion

The assessment results presented in Table 40 indicate the existence of learner needs in thirteen of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District ranged from 26 percent to 51 percent. This range can be compared to an average expected criterion of 48 percent correct answers for items related to knowledge of library use.

Item analysis data for performance objective #1.1.9.3 are provided in Appendix F.

Graphic Materials

Performance Objective 1.1.10

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of graphic materials by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Graphic Materials

Test Situation: Pupils were given graphic materials to look at and use. They were asked to choose the correct answer to questions relating to these materials.

Item: (Map of many shops in a city) In which direction would you walk in order to go from the camera shop to the drug store?

a. southeast
b. southwest
c. northeast
d. northwest

Results

The average grade equivalent scores for comprehension of graphic materials and the percentage of pupils meeting the criterion score of 4.7 are presented in Table 41 for each Educational Development District.

TABLE 41

AVERAGE GRADE EQUIVALENT SCORES AND THE PERCENTAGE OF FOURTH GRADE PUPILS MEETING THE CRITERION BY EDUCATIONAL DEVELOPMENT DISTRICT FOR COMPREHENSION OF GRAPHIC MATERIALS

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Graphic Materials Subtest

Educational Development District	Number of pupils	Average grade equivalent score	Percentage of pupils meeting the criterion
1	377	4.8*	49
2	377	4.7*	49
3	136	4.1	32
4	527	4.8*	48
5	340	4.7*	43
6	324	4.6	40
7	504	5.0*	55
8	947	5.5*	62
9	276	4.8*	50
10	120	4.8*	50
11	293	4.4	35
12	492	4.3	33
13	548	4.0	30
14	299	4.6	46
15	487	4.8*	47
16	63	5.4*	67
Kentucky--Statewide	6,110	4.8*	44

*Criterion score 4.7 attained

Conclusion

The assessment results presented in Table 41 indicate that the expected criterion of a grade equivalency of 4.7 was attained in ten of the sixteen Educational Development Districts. The percentage of pupils equaling or exceeding the criterion by Educational Development District ranged from 30 percent to 67 percent.

Item analysis data, listed by skills/concepts for individual Educational Development Districts, are provided in Appendix F.

Results for boys and girls for the Study Skills/Graphic Materials Subtest by Educational Development District are presented in Appendix E.

Specific Skills/Concepts Related to Comprehension of Graphic Materials

Performance Objective 1.1.10.1

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of symbols, legends, and data presented in graphic or tabular form by attaining an average level of correct answers equal to or exceeding the criterion (56 percent) as measured by the related items of the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Symbols, Legends, and Data Presented in Graphic or Tabular Form

Test Situation: Pupils were given graphic materials to look at and use. They were asked to choose the correct answer to questions dealing with symbols, legends, and data from the graphic materials.

Item: (Map of the highway system in and around Lexington, Kentucky) How many state highways are shown?

a. six
b. two
c. eight
d. four

Results

The average level of items correct for comprehension of symbols, legends, and data presented in graphic or tabular form for each Educational Development District is provided in Table 42.

TABLE 42

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF SYMBOLS, LEGENDS, AND DATA PRESENTED IN GRAPHIC OR TABULAR FORM

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Graphic Materials Subtest, Items #22, 26-29, 31-33

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	55
2	315	56*
3	136	45
4	415	53
5	270	52
6	257	53
7	464	53
8	966	62*
9	217	54
10	95	57*
11	106	46
12	475	45
13	498	44
14	234	50
15	332	53
16	163	32
Kentucky--Statewide	5,235	51

*Criterion average of 56 percent attained

Conclusion

The assessment results presented in Table 42 indicate that the expected criterion of 56 percent correct answers was attained in three of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 32 percent to 62 percent.

Item analysis data for performance objective #1.1.10.1 are provided in Appendix F.

Performance Objective 1.1.10.2

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of relationships presented in graphical form by attaining an average level of correct answers equal to or exceeding the criterion (53 percent) as measured by the related items of the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension of Relationships Presented in Graphical Form

Test Situation: Pupils were given graphic materials to look at and use. They were asked to choose the correct answer to questions relating to the relationships presented in graphical form.

Item: (Bar graph showing the number of home runs made by each boy in the class)
Which boy made the most home runs?

a. Sam
b. Dick
c. Tom
d. John

Results

The average level of items correct for comprehension of relationships presented in graphical form for each Educational Development District is provided in Table 43.

TABLE 43

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION OF RELATIONSHIPS PRESENTED IN GRAPHICAL FORM

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Graphic Materials Subtest
Items #21, 23, 30, 34, 35, 38, 46, 48-50

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	52
2	315	53*
3	136	45
4	415	55*
5	270	54*
6	257	51
7	464	53*
8	966	62*
9	217	53*
10	95	50
11	106	46
12	475	46
13	498	44
14	234	51
15	332	51
16	163	31
Kentucky--Statewide	5,235	40

*Criterion average of 53 percent attained

Conclusion

The assessment results presented in Table 43 indicate that the expected criterion of 53 percent correct answers was attained in six of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 31 percent to 62 percent.

Item analysis data for performance objective #1.1.10.2 are provided in Appendix F.

Performance Objective 1.1.10.3

During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (draw conclusions) of graphic data by attaining an average level of correct answers equal to or exceeding the criterion (48 percent) as measured by the related items of the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Comprehension (Draw Conclusions) of Graphic Data

Test Situation: Pupils were given graphic materials to look at and use. They were asked to choose the correct answer to questions which dealt with drawing conclusions presented in the graph.

Item: (Map of the northeastern region of the United States--big manufacturing areas marked) In which part of this region do you find the least amount of manufacturing?

a. eastern
b. southern
c. western
d. northern

Results

The average level of items correct for comprehension (draw conclusions) of graphic data for each Educational Development District is provided in Table 44.

TABLE 44

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' COMPREHENSION (DRAW CONCLUSIONS) OF GRAPHIC DATA

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Graphic Materials Subtest, Items #25, 36, 37, 40, 41, 43, 47

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	48*
2	315	51*
3	136	43
4	415	51*
5	270	50*
6	257	50*
7	464	52*
8	966	56*
9	217	51*
10	95	53*
11	106	44
12	475	44
13	498	42
14	234	47
15	332	47
16	163	30
Kentucky--Statewide	5,235	47

*Criterion average of 48 percent attained

Conclusion

The assessment results presented in Table 44 indicate that the expected criterion of 48 percent correct answers was attained in nine of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 30 percent to 56 percent.

Item analysis data for performance objective #1.1.10.3 are provided in Appendix F.

Performance Objective 1.1.10.4

During the spring semester of the fourth grade, Kentucky pupils will demonstrate the ability to analyze graphic data and determine extended meaning by attaining an average level of correct answers equal to or exceeding the criterion (44 percent) as measured by the related items of the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Sample Assessment Item for Analysis of Graphic Data to Determine Extended Meaning

Test Situation: Pupils were given graphic materials to look at and use. They were asked to choose the correct answer to questions in which the extending of the meanings in the materials was necessary.

Item: (Map of a small island in the Pacific) Which of the following best describes this island?

a. mostly covered by palm trees
b. mostly covered with valleys
c. mostly covered by mountains
d. covered by equal areas of valleys and mountains

Results

The average level of items correct for analysis of graphic data to determine extended meaning for each Educational Development District is provided in Table 45.

TABLE 45

AVERAGE PERCENTAGE OF CORRECT ANSWERS BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE PUPILS' ANALYSIS OF GRAPHIC DATA AND DETERMINATION OF EXTENDED MEANING

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Graphic Materials Subtest, Items #24, 39, 42, 44, 45

Educational Development District	Number of pupils	Average percentage of correct answers
1	274	43
2	315	45*
3	136	36
4	415	42
5	270	44*
6	257	45*
7	464	42
8	966	47*
9	217	42
10	95	42
11	106	34
12	475	38
13	498	37
14	234	45
15	332	43
16	163	22
Kentucky--Statewide	5,235	40

*Criterion average of 44 percent attained

Conclusion

The assessment results presented in Table 45 indicate that the expected criterion of 44 percent correct answers was attained in six of the sixteen Educational Development Districts. The average percentage of correct answers by Educational Development District for the related items ranged from 22 percent to 47 percent.

Item analysis data for performance objective #1.1.10.4 are provided in Appendix F.

Goal 1.7: Each citizen of the Commonwealth should be assured an opportunity to develop a positive attitude toward the acquisition of knowledge - both formal and informal.

The second general education goal assessed involved measurement of affective behavior concerning attitudes toward (1) school, (2) reading and (3) arithmetic. It was determined that affective behavior assessment results compiled from the Kentucky Student Attitude Inventory would be reported in relation to the percentage of fourth grade pupils who responded positively to individual attitudinal questions. A criterion of 50 percent or greater positive pupil response on individual attitudinal questions was established as the level of desired performance. The Kentucky Student Attitude Inventory is provided in Appendix D. The results for Goal 1.7 are presented below.

Attitude toward School

Performance Objective 1.7.1

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward school by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Attitude toward School Questions

The following questions were asked of fourth grade pupils to assess the pupils' attitude toward school. The directional response which was considered positive is in parentheses following each question.

Question #1 Do you think that school is unfair to students? (no)
Question #2 Is time spent in school important? (yes)
Question #3 Are you proud of your school? (yes)
Question #4 Do you understand the reasons for having school rules? (yes)

Question #5 Do you dislike coming to school? (no)
Question #6 Will your school work help you to do well? (yes)
Question #7 Do you really like what you are taught in school? (yes)

The percentage of fourth grade pupils responding positively to each of the attitude toward "school" questions in each Educational Development District and Statewide is presented in Table 46.

TABLE 46

PERCENTAGE OF FOURTH GRADE PUPILS RESPONDING POSITIVELY TO THE INDIVIDUAL QUESTIONS RELATED TO ATTITUDE TOWARD SCHOOL BY EDUCATIONAL DEVELOPMENT DISTRICT

Kentucky Student Attitude Inventory, Attitude toward School Questions

Educational Development District	Number of pupils	Percentage of positive responses by question						
		1	2	3	4	5	6	7
1	141	76*	89*	79*	77*	52*	96*	70*
2	482	78*	90*	83*	86*	67*	95*	75*
3	178	82*	92*	89*	85*	69*	97*	76*
4	558	82*	92*	88*	85*	69*	97*	79*
5	342	72*	90*	86*	85*	68*	96*	75*
6	357	75*	88*	87*	83*	60*	96*	68*
7	413	77*	88*	86*	82*	63*	96*	96*
8	882	82*	92*	88*	88*	66*	97*	71*
9	269	82*	89*	91*	87*	69*	97*	82*
10	90	78*	87*	88*	79*	63*	96*	83*
11	246	70*	87*	84*	82*	64*	96*	79*
12	374	76*	89*	85*	85*	69*	96*	72*
13	566	77*	89*	87*	86*	69*	97*	81*
14	337	79*	90*	89*	85*	65*	97*	80*
15	446	72*	82*	78*	77*	62*	61*	52*
16	80	94*	98*	95*	94*	76*	99*	89*
Kentucky--Statewide	5,806	78*	89*	86*	85*	66*	96*	75*

*Criterion percentage of 50 percent attained

Conclusion

Results related to attitudes toward school presented in Table 46 indicate that 50 percent or more of the fourth grade pupils gave the desired directional response to questions #1 through #7 for all Educational Development Districts. No learner needs were indicated.

Attitude toward Reading

Performance Objective 1.7.2

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward reading by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Attitude toward Reading Questions

The following questions were asked of fourth grade pupils to assess the pupils' attitude toward reading. The directional response which was considered positive is in parentheses following each question.

Question #1 Do you think that you are a bad reader? (no)
Question #2 Do you like to read before you go to bed? (yes)
Question #3 Is reading your favorite subject in school? (yes)
Question #4 Do you like to read aloud at school? (yes)
Question #5 Do you think there are other things that are more fun than reading? (no)
Question #6 Do you think that reading is important? (yes)
Question #7 When you have some free time, do you like to read a book? (yes)

The percentage of fourth grade pupils responding positively to each of the attitude toward "reading" questions in each Educational Development District and Statewide is presented in Table 47.

TABLE 47

PERCENTAGE OF FOURTH GRADE PUPILS RESPONDING POSITIVELY TO THE INDIVIDUAL QUESTIONS RELATED TO ATTITUDE TOWARD READING BY EDUCATIONAL DEVELOPMENT DISTRICT

Kentucky Student Attitude Inventory, Attitude toward Reading Questions

Educational Development District	Number of pupils	Percentage of positive responses by question						
		1	2	3	4	5	6	7
1	141	68*	51*	27	54*	5	94*	59*
2	482	75*	60*	33	59*	11	94*	67*
3	178	70*	58*	33	59*	18	94*	67*
4	558	74*	62*	34	54*	13	93*	65*
5	342	69*	61*	30	62*	11	93*	63*
6	357	64*	58*	28	57*	10	93*	52*
7	413	73*	60*	29	55*	10	93*	58*
8	882	73*	59*	25	53*	9	95*	59*
9	269	69*	70*	30	57*	12	95*	70*
10	90	74*	56*	36	68*	17	92*	66*
11	246	68*	57*	26	55*	11	94*	60*
12	374	71*	60*	42	67*	16	94*	71*
13	566	71*	65*	39	63*	14	94*	67*
14	337	68*	64*	39	59*	8	93*	71*
15	446	73*	72*	26	57*	11	91*	56*
16	80	81*	65*	38	61*	16	98*	80*
Kentucky--Statewide	5,806	71*	61*	31	57*	11	94*	63*

*Criterion percentage of 50 percent attained

Conclusion

Results related to attitudes toward reading presented in Table 47 indicate that 50 percent or more of the fourth grade pupils gave the desired directional response to questions #1, 2, 4, 6, and 7 for all Educational Development Districts. However, a learner need was indicated in all Educational Development Districts for questions #3 and 5 due to less than 50 percent of the pupils giving the desired directional response.

Attitude toward Arithmetic

Performance Objective 1.7.3

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward arithmetic by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Attitude toward Arithmetic Questions

The following questions were asked of fourth grade pupils to assess the pupils' attitude toward arithmetic. The directional response which was considered positive is in parentheses following each question.

Question #1 Is math boring to you? (no)
Question #2 Is math your favorite subject? (yes)
Question #3 Do you like to work all kinds of math problems? (yes)
Question #4 Do you like to explain math problems? (yes)
Question #5 Do you think math is important? (yes)
Question #6 Would you like to spend more time in math? (yes)
Question #7 Do you think there are other things that are more fun than math? (no)

The percentage of fourth grade pupils responding positively to each of the attitude toward "arithmetic" questions in each Educational Development District and Statewide is presented in Table 48.

TABLE 48

PERCENTAGE OF FOURTH GRADE PUPILS RESPONDING POSITIVELY TO THE INDIVIDUAL QUESTIONS RELATED TO ATTITUDE TOWARD ARITHMETIC BY EDUCATIONAL DEVELOPMENT DISTRICT

Kentucky Student Attitude Inventory, Attitude toward Arithmetic Questions

Educational Development District	Number of pupils	Percentage of positive responses by question						
		1	2	3	4	5	6	7
1	141	67*	46	51*	39	95*	46	19
2	482	69*	47	46	53*	94*	45	22
3	178	69*	47	46	53*	94*	45	22
4	558	69*	48	53*	47	95*	48	20
5	342	66*	39	47	42	92*	43	14
6	357	65*	48	50*	42	93*	39	17
7	413	64*	50*	50*	46	95*	48	16
8	882	69*	46	48	40	95*	43	16
9	269	74*	55*	59*	50*	95*	50*	28
10	90	70*	39	56*	54*	94*	42	19
11	246	73*	50*	57*	51*	94*	56*	24
12	374	62*	41	55*	45	91*	49	20
13	566	62*	49	53*	52*	93*	51*	22
14	337	63*	39	50*	43	94*	40	15
15	446	61*	48	49	44	90*	44	19
16	80	80*	56*	79*	49	99*	59*	20
Kentucky--Statewide	5,806	66*	47	52*	45	94*	46	19

*Criterion percentage of 50 percent attained

Conclusion

Results related to attitudes toward arithmetic presented in Table 48 indicate that 50 percent or more of the fourth grade pupils gave the desired directional response to questions #1 and #5 for all Educational Development Districts. However, a learner need was indicated in some Educational Development Districts for questions #2, 3, 4, 6, and 7 due to less than 50 percent of the pupils giving the desired directional response.

GOAL AREA III: HUMAN RELATIONSHIPS

Goal 3.2: Each citizen of the Commonwealth should have an understanding of the worth and dignity of other people.

The goal assessed in Human Relationship Area involved measurement of affective behavior concerning attitudes toward peers. It was determined that affective behavior assessment results compiled from the Kentucky Student Attitude Inventory would be reported in relation to the percentage of fourth grade pupils who responded positively to individual attitudinal questions. A criterion of 50 percent or greater positive pupil response on individual attitudinal questions was established as the level of desired performance. The Kentucky Student Attitude Inventory is provided in Appendix D. The results for Goal 3.2 are presented below.

Performance Objective 3.2.1

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward peers by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Attitude toward Peers Questions

The following questions were asked of fourth grade pupils to assess the pupils' attitude toward "peers." The directional response which was considered positive is in parentheses following each question.

Question #1 See friends at school is fun? (yes)
Question #2 Do students in my school make other students feel unwanted? (no)
Question #3 Do other boys and girls play fair at school? (yes)
Question #4 Do you want to get the same grades as your friends? (yes)
Question #5 Do you like to play by yourself at school? (no)

Question #6 Do you like most of your classmates? (yes)
Question #7 Do your friends think that getting good grades is important? (yes)

The percentage of fourth grade pupils responding positively to each of the attitude toward "peers" questions in each Educational Development District and Statewide is presented in Table 49.

TABLE 49

PERCENTAGE OF FOURTH GRADE PUPILS RESPONDING POSITIVELY TO THE INDIVIDUAL QUESTIONS RELATED TO ATTITUDE TOWARD PEERS BY EDUCATIONAL DEVELOPMENT DISTRICT

Kentucky Student Attitude Inventory, Attitude toward Peers Questions

Educational Development District	Number of pupils	Percentage of positive responses by question						
		1	2	3	4	5	6	7
1	141	94*	44	46	34	93*	86*	89*
2	482	96*	49	42	23	94*	93*	90*
3	178	93*	50*	47	27	96*	92*	89*
4	558	94*	49	50*	31	93*	93*	90*
5	342	96*	43	54*	33	95*	94*	88*
6	357	96*	48	42	32	94*	94*	87*
7	413	96*	48	42	32	94*	94*	87*
8	882	94*	53*	51*	27	95*	90*	88*
9	269	95*	44	54*	32	89*	93*	89*
10	90	97*	48	59*	27	94*	96*	91*
11	246	96*	46	50*	32	92*	88*	89*
12	374	95*	40	29	37	94*	93*	92*
13	566	90*	58*	48	32	88*	92*	84*
14	337	93*	51*	42	26	89*	96*	86*
15	446	97*	60*	48	28	94*	96*	91*
16	80	90*	52*	54*	23	90*	90*	81*
Kentucky--Statewide	5,806	94*	50*	48	29	92*	93*	88*

*Criterion percentage of 50 percent attained

Conclusion

Results related to attitudes toward peers presented in Table 49 indicate that 50 percent or more of the fourth grade pupils gave the desired directional response to questions #1, 5, 6, and 7 for all Educational Development Districts. However, a learner need was indicated in some Educational Development Districts for questions #2, 3, and 4 due to less than 50 percent of the pupils giving the desired directional response.

GOAL AREA VI: PHYSICAL AND MENTAL WELL BEING

Goal 6.3: Each citizen of the Commonwealth should have a positive and realistic acceptance of self.

The goal assessed in Physical and Mental Well Being Area involved measurement of affective behavior concerning attitudes toward self. It was determined that affective behavior assessment results compiled from the Kentucky Student Attitude Inventory would be reported in relation to the percentage of fourth grade pupils who responded positively to individual attitudinal questions. A criterion of 50 percent or greater positive pupil response on individual attitudinal questions was established as the level of desired performance. The Kentucky Student Attitude Inventory is provided in Appendix D. The results for Goal 6.3 are presented below.

Performance Objective 6.3.1

During the spring semester of the fourth grade, Kentucky pupils will respond positively toward self by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

Attitude toward Self Questions

The following questions were asked of fourth grade pupils to assess the pupils' attitude toward "self." The directional response which was considered positive is in parentheses following each question.

Question #1 Is it easy for you to make friends? (yes)
Question #2 Do you worry about giving the wrong answer in class? (no)
Question #3 Do you get along well with others? (yes)
Question #4 Do you usually feel unhappy? (no)
Question #5 Can you do things as well as other children? (yes)
Question #6 Do you worry about getting good grades? (no)
Question #7 Do you feel that you do a good job of studying? (yes)

The percentage of fourth grade pupils responding positively to each of the attitude toward "self" questions in each Educational Development District and Statewide is presented in Table 50.

TABLE 50

PERCENTAGE OF FOURTH GRADE PUPILS RESPONDING POSITIVELY TO THE INDIVIDUAL QUESTIONS RELATED TO ATTITUDE TOWARD SELF BY EDUCATIONAL DEVELOPMENT DISTRICT

Kentucky Student Attitude Inventory, Attitude toward Self Questions

Educational Development District	Number of pupils	Percentage of positive responses by question						
		1	2	3	4	5	6	7
1	141	83*	22	74*	72*	52*	16	54*
2	482	80*	28	80*	69*	47	15	69*
3	178	85*	20	76*	66*	47	12	61*
4	558	80*	26	79*	68*	49	23	61*
5	342	77*	21	79*	66*	46	18	69*
6	357	77*	25	84*	61*	42	26	64*
7	413	80*	26	86*	69*	51*	21	72*
8	882	80*	24	84*	77*	55*	23	68*
9	269	83*	29	88*	71*	55*	20	78*
10	90	77*	12	89*	66*	46	18	64*
11	246	81*	21	71*	59*	40	11	61*
12	374	79*	32	82*	62*	42	20	68*
13	566	78*	20	71*	54*	42	21	59*
14	337	82*	28	84*	66*	39	18	69*
15	446	71*	32	79*	74*	46	19	64*
16	80	86*	26	94*	81*	58*	24	83*
Kentucky--Statewide	5,806	79*	25	81*	68*	47	20	66*

*Criterion percentage of 50 percent attained

Conclusion

Results related to attitudes toward self presented in Table 50 indicate that 50 percent or more of the fourth grade pupils gave the desired directional response to questions #1, 3, 4, and 7 for all Educational Development Districts. However, a learner need was indicated in some Educational Development Districts for questions #2, 5, and 6 due to less than 50 percent of the pupils giving the desired directional response.

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APPENDIX A

GOALS OF EDUCATION IN KENTUCKY

GOALS OF EDUCATION IN KENTUCKY

GOAL AREA I: GENERAL EDUCATION

1.1 Skill in written and oral communication, reading, computation, and mathematical concepts

1.2 Understand the language common to the various learning disciplines

1.3 Knowledge of logical approaches for problem solving

1.4 Application of acquired skills to real-life situations

1.5 Knowledge in the various learning disciplines (e.g. science, social science, foreign language, etc.)

1.6 Understand the resources available and the methods of collecting information

1.7 Positive attitude toward the acquisition of knowledge - both formal and informal

GOAL AREA II: ECONOMIC UNDERSTANDING

2.1 Consumer knowledge

2.2 Information on tax structures and obligations

2.3 An understanding of money management

2.4 A knowledge of the American economic system in relation to international economics

2.5 Demonstrate economic independence

GOAL AREA III: HUMAN RELATIONSHIPS

3.1 Knowledge of one's self in relation to capabilities and interests

3.2 Understanding the worth and dignity of other people

3.3 Ability to work with and relate to other individuals and groups

3.4 Appreciation of our culture and those attributes which have enabled man to survive and accomplish

GOAL AREA IV: CITIZENSHIP

4.1 Understanding the necessity for structured social and political organization

4.2 Understanding the necessity for ethical values in determining right from wrong

4.3 Knowledge of the interdependence of the individual's rights and responsibilities in a democracy

4.4 Awareness of one's relationship to his physical environment and the wise use of resources

4.5 Understanding the effects of technology and of population growth on the environment

4.6 Attitude of cooperation for the betterment of one's community and society

4.7 Understanding the relationship of historical occurrences to present and future planning

4.8 Knowledge of international relationships

4.9 Awareness of the importance of involvement in community affairs

GOAL AREA V: CREATIVE, CONSTRUCTIVE AND CRITICAL THINKING

5.1 Ability to examine constructively and creatively

5.2 Development of individual creative talents

5.3 Respect for creative contributions of others

5.4 Application of the logical processes (e.g. research, analysis, evaluation, etc.)

5.5 Critical awareness of the less obvious qualities or conditions which contribute to total understanding

GOAL AREA VI: PHYSICAL AND MENTAL WELL BEING

6.1 Develop physical fitness through appropriate activities

6.2 Understanding of the body processes and functions

6.3 A positive and realistic acceptance of self

6.4 Development of skills for and appreciation of leisure time activities

6.5 Understanding and value for good nutritional habits

GOAL AREA VII: OCCUPATIONAL COMPETENCE

7.1 Understanding the contributions of occupations to society

7.2 Understanding of the variety of career opportunities

7.3 Acquisition of occupational skills (entry and maintenance skills)

7.4 Ability to cope with changing occupational requirements and demands

GOAL AREA VIII: CULTURAL APPRECIATION

8.1 Acquisition of knowledge of art, musical, literary and drama forms

8.2 Understanding of and value for the historical and cultural heritage

8.3 Development of aesthetic values

8.4 Expression of cultural values

APPENDIX B

HIERARCHY OF GOALS AND PERFORMANCE OBJECTIVES

HIERARCHY OF GOALS AND PERFORMANCE OBJECTIVES

GRADE 4

Kentucky Educational Assessment Program (1974)

GOAL AREA I: GENERAL EDUCATION

Goal 1.1: Each citizen of the Commonwealth should be assured an opportunity to realize his full potential in written and oral communication, reading, computation, and mathematical concepts.

Related Performance Objectives

1.1.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of vocabulary by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Reading Vocabulary Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.1.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of the meaning of words in context by attaining an average level of correct answers equal to or exceeding the criterion (57 percent) as measured by the related items of the Reading Vocabulary Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate reading comprehension by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of directly stated details (literal meaning) by attaining an average level of correct answers equal to or exceeding the criterion (52 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of words and phrases (simple rewording) by attaining an average level of correct answers equal to or exceeding the criterion (64 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (paraphrasing) of the meaning of ideas by attaining an average level of correct answers equal to or exceeding the criterion (65 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.4 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of main ideas by attaining an average level of correct answers equal to or exceeding the criterion (56 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.5 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of relationships by attaining an average level of correct answers equal to or exceeding the criterion (46 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.6 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (draw conclusions) of given facts and statements by attaining an average level of correct answers equal to or exceeding the criterion (46 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.7 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension (inference) of contextual clues by attaining an average level of correct answers equal to or exceeding the criterion (60 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.2.8 During the spring semester of the fourth grade, Kentucky pupils will demonstrate analysis of indefinite or incomplete statements (extended meaning) by attaining an average level of correct answers equal to or exceeding the criterion (63 percent) as measured by the related items of the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of spelling by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language/Spelling Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.3.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of correctly and incorrectly spelled words by attaining an average level of correct answers equal to or exceeding the criterion (58 percent) as measured by the related items of the Language/Spelling Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.4 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of the mechanics of language by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.4.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of punctuation skills by attaining an average level of correct answers equal to or exceeding the criterion (63 percent) as measured by the related items of the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.4.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of capitalization skills by attaining an average level of correct answers equal to or exceeding the criterion (40 percent) as measured by the related items of the Language Mechanics Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.5 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of language expression by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.5.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of correct grammatical usage by attaining an average level of correct answers equal to or exceeding the criterion (61 percent) as measured by the related items of the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.5.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of clarity and/or economy of expression by attaining an average level of correct answers equal to or exceeding the criterion (35 percent) as measured by the related items of the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.5.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of the author's implication (word choice) by attaining an average level of correct answers equal to or exceeding the criterion

(55 percent) as measured by the related items of the Language Expression Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.6 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of arithmetic computation by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.6.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of addition skills by attaining an average level of correct answers equal to or exceeding the criterion (64 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.6.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of subtraction skills by attaining an average level of correct answers equal to or exceeding the criterion (62 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.6.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of multiplication skills by attaining an average level of correct answers equal to or exceeding the criterion (54 percent) as measured by the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.6.4 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of division skills by attaining an average level of correct answers equal to or exceeding the criterion (53 percent) as measured by the related items of the Arithmetic Computation Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of arithmetic concepts by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of arithmetic concepts by attaining an average level of correct answers equal to or exceeding the criterion (53 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of arithmetic concepts (converting form) by attaining an average level of

correct answers equal to or exceeding the criterion (57 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of equations by attaining an average level of correct answers equal to or exceeding the criterion (66 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7.4 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of comparative relationships by attaining an average level of correct answers equal to or exceeding the criterion (56 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7.5 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of relationships (ratio, time, part-whole, sequence, geometric) by attaining an average level of correct answers equal to or exceeding the criterion (54 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.7.6 During the spring semester of the fourth grade, Kentucky pupils will demonstrate analysis of the components of arithmetic problems (organization) by attaining an average level of correct answers equal to or exceeding the criterion (44 percent) as measured by the related items of the Arithmetic Concepts Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.8 During the spring semester of the fourth grade, Kentucky pupils will demonstrate application of skills in solving arithmetic word problems by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.8.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of problem-solving (selecting methods) by attaining an average level of correct answers equal to or exceeding the criterion (41 percent) as measured by the related items of the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.8.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of problem-solving (correct solution) by attaining an average level of

correct answers equal to or exceeding the criterion (62 percent) as measured by the related items of the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.8.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate analysis of the components of arithmetic word problems (organization) by attaining an average level of correct answers equal to or exceeding the criterion (42 percent) as measured by the related items of the Arithmetic Application Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.9 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of reference material techniques by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.9.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of parts of books by attaining an average level of correct answers equal to or exceeding the criterion (48 percent) as measured by the related items of the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.9.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of dictionary use by attaining an average level of correct answers equal to or exceeding the criterion (47 percent) as measured by the related items of the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.9.3 During the spring semester of the fourth grade, Kentucky pupils will demonstrate knowledge of library use by attaining an average level of correct answers equal to or exceeding the criterion (48 percent) as measured by the related items of the Study Skills/Reference Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.10 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of graphic materials by attaining an average grade equivalent score equal to or exceeding the criterion (4.7) as measured by the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.10.1 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of symbols, legends, and data presented in graphic or tabular form by attaining an average level of correct answers equal to or exceeding the criterion (56 percent) as measured by the related items of the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

1.1.10.2 During the spring semester of the fourth grade, Kentucky pupils will demonstrate comprehension of relationships presented in graphical form by attaining an average level of correct answers equal to or exceeding the criterion (53 percent) as measured by the related items of the Study Skills/Graphic Materials Subtest of the Comprehensive Tests of Basic Skills, Form Q, Level 2.

Goal 1.7: Each citizen of the Commonwealth should be assured an opportunity to develop a positive attitude toward the acquisition of knowledge - both formal and informal.

Related Performance Objectives

1.7.1 During the spring semester of the fourth grade, Kentucky pupils will respond positively toward school by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

1.7.2 During the spring semester of the fourth grade, Kentucky pupils will respond positively toward reading by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

1.7.3 During the spring semester of the fourth grade, Kentucky pupils will respond positively toward arithmetic by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

GOAL AREA III: HUMAN RELATIONSHIPS

Goal 3.2: Each citizen of the Commonwealth should have an understanding of the worth and dignity of other people.

Related Performance Objective

3.2.1 During the spring semester of the fourth grade, Kentucky pupils will respond positively toward peers by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

GOAL AREA VI: PHYSICAL AND MENTAL WELL BEING

Goal 6.3: Each citizen of the Commonwealth should have a positive and realistic acceptance of self.

Related Performance Objective

6.3.1 During the spring semester of the fourth grade, Kentucky pupils will respond positively toward self by demonstrating a directional response equal to or exceeding the criterion (50 percent) on the related individual items of the Kentucky Student Attitude Inventory.

APPENDIX C

SAMPLING PROCEDURES AND SAMPLE SIZE BY PARTICIPATING SCHOOL DISTRICT, EDUCATIONAL DEVELOPMENT DISTRICT, AND STATEWIDE

SAMPLING PROCEDURES

The steps outlined below were implemented to select the sample of fourth grade pupils by Educational Development District and Statewide.

Sample School District Selection

In 1974 each school district in the state was asked to participate in the program. 106 districts chose to participate.

Sample Pupil Selection

In order that the resultant data be a valid indicator at the district level, a representative sample within each district was selected in the following manner:

> A random numbers generator was used to select pupils by computers for inclusion in the assessment sample. When data were not available from some of the school districts, the following procedures were followed to randomly select the required number of pupils of a given grade in the school district sample.
>
> Every fifth pupil was selected, beginning with the row of pupils to the extreme left of the teacher as she faced her pupils, selecting the first pupil, continuing down each row until the required number had been selected.

The number of pupil participants selected for fourth grade by school district, Educational Development District, and Statewide are presented in Table 51.

TABLE 51

FOURTH GRADE SAMPLE SIZE BY PARTICIPATING SCHOOL DISTRICT AND EDUCATIONAL DEVELOPMENT DISTRICT

Educational Development District	Participating School District	Number of pupils in the sample
1	Calloway County	46
	Carlisle County	70
	Fulton Independent	52
	Marshall County	85
	Mayfield Independent	37
	McCracken County	69
	Murray Independent	21
Total--Educational Development District #1		389
2	Caldwell County	42
	Central City Independent	31
	Crittenden County	32
	Dawson Springs Independent	30
	Greenville Independent	38
	Hopkins County	101
	Muhlenberg County	80
	Todd County	41
Total--Educational Development District #2		395
3	Hancock County	30
	Henderson Independent	39
	Providence Independent	30
	Webster County	37
Total--Educational Development District #3		136
4	Allen County	41
	Barren County	60
	Bowling Green Independent	73
	Caverna Independent	29
	Edmonson County	34
	Hart County	52
	Logan County	60
	Monroe County	46
	Simpson County	55
	Warren County	85
Total--Educational Development District #4		535

TABLE 51 (Continued)

FOURTH GRADE SAMPLE SIZE BY PARTICIPATING SCHOOL DISTRICT AND EDUCATIONAL DEVELOPMENT DISTRICT

Educational Development District	Participating School District	Number of pupils in the sample
5	Bardstown Independent	30
	Breckinridge County	51
	Grayson County	70
	Marion County	71
	Nelson County	59
	West Point Independent	23
Total--Educational Development District #5		340
6	Bullitt County	128
	Eminence Independent	30
	Henry County	31
	Oldham County	56
	Shelby County	49
	Spencer County	30
Total--Educational Development District #6		324
7	Bellevue Independent	29
	Boone County	46
	Campbell County	62
	Covington Independent	103
	Erlanger Independent	50
	Ft. Thomas Independent	38
	Gallatin County	30
	Grant County	34
	Newport Independent	31
	Pendleton County	40
Total--Educational Development District #7		514
8	Jefferson County	966
Total--Educational Development District #8		966
9	Bracken County	30
	Fleming County	44
	Mason County	30
	Maysville Independent	17
	Montgomery County	49

TABLE 51 (Continued)

FOURTH GRADE SAMPLE SIZE BY PARTICIPATING SCHOOL DISTRICT AND EDUCATIONAL DEVELOPMENT DISTRICT

Educational Development District	Participating School District	Number of pupils in the sample
9 (continued)	Mt. Sterling Independent	30
	Robertson County	33
	Rowan County	45
Total--Educational Development District #9		278
10	Ashland Independent	24
	Boyd County	71
	Fairview Independent	30
Total--Educational Development District #10		125
11	Paintsville Independent	79
	Pike County	190
	Pikeville Independent	27
Total--Educational Development District #11		296
12	Breathitt County	63
	Hazard Independent	29
	Jackson Independent	31
	Jenkins Independent	30
	Knott County	76
	Lee County	30
	Leslie County	63
	Letcher County	72
	Owsley County	30
	Perry County	81
Total--Educational Development District #12		505
13	Barbourville Independent	33
	Bell County	82
	Clay County	80
	Corbin Independent	30
	Harlan County	107
	Harlan Independent	30
	Knox County	96

TABLE 51 (Continued)

FOURTH GRADE SAMPLE SIZE BY PARTICIPATING SCHOOL DISTRICT AND EDUCATIONAL DEVELOPMENT DISTRICT

Educational Development District	Participating School District	Number of pupils in the sample
13 (continued)	Lynch Independent	20
	Middlesboro Independent	50
	Williamsburg Independent	30
Total--Educational Development District #13		558
14	Adair County	50
	Casey County	53
	Cumberland County	30
	Green County	36
	Monticello Independent	30
	Science Hill Independent	22
	Taylor County	45
	Wayne County	48
Total--Educational Development District #14		314
15	Bourbon County	44
	Boyle County	40
	Danville Independent	42
	Frankfort Independent	30
	Franklin County	87
	Harrodsburg Independent	30
	Jessamine County	74
	Nicholas County	29
	Scott County	57
	Woodford County	57
Total--Educational Development District #15		490
16	Clark County	100
	Estill County	63
Total--Educational Development District #16		163
TOTAL--Statewide		6,328

APPENDIX D

KENTUCKY STUDENT ATTITUDE INVENTORY

KENTUCKY EDUCATIONAL NEEDS ASSESSMENT

Student Attitude Inventory, Grade 4

Directions to be Read by the Test Administrator

My name is _____. I'm going to be asking you some questions, which are different from the usual school questions, for these are about how you feel and so have no right or wrong answers. First, I'll hand out the answer sheets and then I'll tell you more about the questions.

Do not put your names--I repeat, do not put your names--on the answer sheet. Color the circle "Male" if you're a boy, or "Female" if you're a girl. Print the number of our district in the spaces under the words "identification number". (Note to test administrator: print the district number on the chalkboard for the students to copy.) Now color the number in the column of circles under each box that is the same as the number in the box at the top of each column. Under this section is a box marked grade. Color the circle with a "4" in it.

As I said before, I am going to ask you some questions. No one will see your answers but me--not your teacher, nor your principal, nor your parents. These questions are different because there are no right or wrong answers. You are to listen to each question and then answer "Yes" or "No". If your answer is "Yes", color the circle "T". If your answer is "No", color the circle "F". For example, if I asked this question: "Do you like to play ball?", some of you would color the circle with a "T" for "Yes" and some of you would color the circle with an "F" for "No".

Your answer depends on how you think and feel about things. Remember, listen carefully to each question and color the circle "T" for "Yes" or the circle "F" for "No" after deciding how you think and feel. If you don't understand a question, ask about it. Be sure to color one circle "T" or "F" for every question.

Do not color any of the plain white circles on this test. Be sure the number on your answer sheet is the same as the number of the question you are answering.

There are 35 questions to be answered on this test. Start with number 1 on the separate answer sheet and mark until you read the number 35 in the middle of the fourth column.

(NOTE TO TEST ADMINISTRATORS: Read each question twice to the students and be sure the students use a soft lead pencil, No. 1 or No. 2, to mark the answer sheet.)

Please illustrate on the chalkboard how students should respond as follows:

If answer is Yes

● (F)

If answer is No

(T) ●

Because the answer sheets will be machine scored, please check each sheet, after collecting, to ensure that the circles filled in by the student are sufficiently dark and that other stray marks are eliminated from the paper.

1. Is it easy for you to make friends?
2. Do you worry about giving the wrong answer in class?
3. Do you get along well with others?
4. Do you usually feel unhappy?
5. Can you do things as well as other children?
6. Do you worry about getting good grades?
7. Do you feel that you do a good job of studying?
8. Seeing friends at school is fun?
9. Do students in my school make other students feel unwanted?
10. Do other boys and girls play fair at school?
11. Do you want to get the same grades as your friends?
12. Do you like to play by yourself at school?
13. Do you like most of your classmates?
14. Do your friends think that getting good grades is important?
15. Do you think that you are a bad reader?
16. Do you like to read before you go to bed?
17. Is reading your favorite subject in school?
18. Do you like to read aloud at school?
19. Do you think there are other things that are more fun than reading?
20. Do you think that reading is important?
21. Do you think that school is unfair to students?
22. When you have some free time, do you like to read a book?
23. Is time spent in school important?
24. Are you proud of your school?
25. Do you understand the reasons for having school rules?
26. Do you dislike coming to school?

27. Will your school work help you to do well?

28. Do you really like what you are taught in school?

29. Is math boring to you?

30. Is math your favorite subject?

31. Do you like to work all kinds of math problems?

32. Do you like to explain math problems?

33. Do you think math is important?

34. Would you like to spend more time in math?

35. Do you think there are other things that are more fun than math?

APPENDIX E

RESULTS OF ANALYSIS OF DATA FOR BOYS AND FOR GIRLS

TABLE 52

AVERAGE GRADE EQUIVALENCY SCORES IN READING FOR FOURTH GRADE PUPILS
BY SEX AND EDUCATIONAL DEVELOPMENT DISTRICT

Comprehensive Tests of Basic Skills, Form Q, Level 2

Educational Development District	Number of pupils		Average grade equivalency Reading Vocabulary		Average grade equivalency Reading Comprehension	
	Boys	Girls	Boys	Girls	Boys	Girls
1	204	175	4.7	4.9	4.9	5.2
2	203	192	4.3	4.5	4.5	4.9
3	68	68	3.8	4.3	3.8	4.5
4	286	249	4.7	4.8	4.7	5.2
5	175	165	4.5	4.6	4.4	4.7
6	164	160	4.3	4.6	4.3	4.8
7	247	267	4.7	4.8	4.7	4.9
8	463	503	5.4	5.4	5.6	5.7
9	143	135	4.4	4.6	4.5	4.9
10	61	64	4.4	5.0	4.3	5.2
11	156	140	4.4	4.3	4.3	4.4
12	249	256	4.0	4.3	4.1	4.5
13	264	294	4.1	4.3	4.0	4.4
14	147	167	4.4	4.5	4.6	4.7
15	210	280	4.5	4.8	4.5	5.1
16	72	91	5.0	5.1	5.5	5.6
Kentucky--Statewide	3,119	3,209	4.6	4.7	4.6	5.0

TABLE 53

AVERAGE GRADE EQUIVALENCY SCORES IN LANGUAGE FOR FOURTH GRADE PUPILS
BY SEX AND EDUCATIONAL DEVELOPMENT DISTRICT

Comprehensive Tests of Basic Skills, Form Q, Level 2

Educational Development District	Number of pupils		Average grade equivalency Language Mechanics		Average grade equivalency Language Expression		Average grade equivalency Spelling	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	206	176	4.9	5.6	4.7	5.2	4.3	5.7
2	203	192	4.6	5.6	4.3	5.0	4.1	4.9
3	68	68	3.9	4.5	3.4	4.3	3.7	4.5
4	286	249	4.8	5.6	4.6	5.3	4.5	5.1
5	175	165	4.7	5.3	4.6	5.0	4.4	5.0
6	164	160	4.3	4.9	4.2	4.7	4.1	4.7
7	247	267	4.8	5.7	4.7	5.3	4.6	5.2
8	463	503	5.4	6.1	5.5	5.9	5.1	5.6
9	143	135	4.7	5.7	4.2	4.8	4.3	4.9
10	61	64	4.8	5.4	4.6	5.2	4.2	5.1
11	156	140	5.1	5.2	4.5	4.5	4.1	4.1
12	249	256	4.2	5.1	4.1	4.6	3.9	4.7
13	264	294	4.1	4.7	3.8	4.3	3.8	4.4
14	147	167	5.2	5.8	4.4	4.7	4.3	4.8
15	210	280	4.6	5.4	5.2	5.0	4.5	4.8
16	72	91	5.9	6.6	6.1	6.2	5.4	6.0
Kentucky--Statewide	3,119	3,209	4.7	5.0	4.5	5.1	4.4	5.0

TABLE 54

AVERAGE GRADE EQUIVALENCY SCORES IN ARITHMETIC FOR FOURTH GRADE PUPILS
BY SEX AND EDUCATIONAL DEVELOPMENT DISTRICT

Comprehen ive Tests of Basic Skills, Form Q, Level 2

Educational Development District	Number of pupils		Average grade equivalency Arithmetic Computation		Average grade equivalency Arithmetic Concept		Average grade equivalency Arithmetic Applications	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	203	176	4.7	4.8	4.6	4.6	4.5	4.4
2	203	192	4.5	4.9	4.4	4.7	4.3	4.6
3	68	68	4.2	4.4	3.7	4.0	3.7	3.9
4	286	249	4.7	4.9	4.6	4.8	4.7	4.5
5	175	165	4.7	4.7	4.6	4.7	4.5	4.5
6	164	160	4.5	4.6	4.4	4.4	4.6	4.1
7	247	267	4.8	5.0	5.1	5.1	5.0	5.0
8	463	503	5.0	5.2	5.5	5.3	5.4	5.0
9	134	135	4.5	4.8	4.5	4.7	4.6	4.3
10	61	64	4.5	4.8	4.5	4.8	4.3	4.6
11	156	140	4.5	4.6	4.6	4.5	4.6	4.4
12	249	256	4.0	4.7	4.3	4.4	4.6	4.3
13	264	294	4.2	4.5	4.1	4.2	4.3	4.2
14	147	167	4.7	5.0	4.7	4.8	4.6	4.6
15	210	280	4.5	4.8	4.5	4.7	4.5	4.5
16	72	91	4.8	5.1	5.1	5.2	5.1	5.0
Kentucky--Statewide	3,119	3,209	4.6	4.8	4.7	4.7	4.5	4.6

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TABLE 55

AVERAGE GRADE EQUIVALENCY SCORES IN STUDY SKILLS FOR FOURTH GRADE PUPILS
BY SEX AND EDUCATIONAL DEVELOPMENT DISTRICT

Comprehensive Tests of Basic Skills, Form Q, Level 2

Educational Development District	Number of pupils		Average grade equivalency Reference Materials		Average grade equivalency Graphic Materials	
	Boys	Girls	Boys	Girls	Boys	Girls
1	204	176	4.7	4.9	4.7	4.8
2	203	192	4.4	5.1	4.6	4.9
3	68	68	3.9	4.8	4.0	4.3
4	286	249	4.7	5.2	4.7	5.0
5	175	165	4.5	4.9	4.7	4.7
6	164	160	4.3	4.9	4.6	4.7
7	247	267	4.9	5.1	5.1	5.0
8	463	503	5.4	5.7	5.5	5.4
9	143	135	4.5	5.2	4.8	4.9
10	61	64	4.7	5.0	4.7	4.9
11	156	140	4.5	4.7	4.5	4.2
12	249	256	4.0	4.6	4.2	4.3
13	264	294	3.9	4.4	4.0	4.1
14	147	167	4.7	5.1	4.5	4.7
15	210	280	4.5	5.0	4.7	5.0
16	72	91	5.0	5.7	5.5	5.4
Kentucky--Statewide	3,119	3,209	5.0	4.8	4.8	4.8

TABLE 56

STATEWIDE PERCENTAGES OF POSITIVE RESPONSE FOR FOURTH GRADE PUPILS BY SEX FOR ATTITUDINAL QUESTIONS

Kentucky Student Attitude Inventory

Attitudinal area number and description	Question number	Percentage of positive response		
		All pupils	Boys	Girls
6.3.1 Attitude toward Self	1	79	79	79
	2	25	28	23
	3	81	80	81
	4	68	68	68
	5	47	51	44
	6	20	21	19
	7	66	65	65
3.2.1 Attitude toward Peers	1	94	93	96
	2	50	52	48
	3	52	55	50
	4	29	33	27
	5	92	91	92
	6	93	91	94
	7	88	87	89
1.8.1 Attitude toward School	1	71	71	71
	2	61	51	70
	3	69	72	65
	4	57	53	61
	5	89	90	87
	6	94	92	96
	7	78	73	83
1.8.2 Attitude toward Reading	1	63	57	69
	2	89	96	92
	3	14	18	10
	4	85	81	87
	5	34	40	29
	6	96	95	98
	7	75	71	79
1.8.3 Attitude toward Arithmetic	1	66	64	69
	2	47	48	45
	3	48	51	46
	4	45	44	46
	5	94	92	95
	6	45	45	47
	7	19	19	19

APPENDIX F

ITEM ANALYSIS RESULTS BY SKILL/CONCEPT

TABLE 57

READING VOCABULARY ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Vocabulary Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.1.1 Knowledge of the meaning of words in context	1	89	88	89	89	79	91	86	85	90	94	88	94	95	81	80	91	85	94
	2	90	88	88	88	85	90	89	81	90	94	88	86	83	83	80	90	86	94
	3	80	76	78	73	65	78	78	73	77	86	72	78	65	71	63	73	81	83
	4	71	67	67	63	53	68	67	67	67	81	66	54	58	58	53	68	71	75
	5	75	71	72	66	60	73	73	67	75	85	67	77	71	59	56	68	72	80
	6	68	71	71	70	58	74	71	65	76	82	68	61	64	65	57	71	68	82
	7	80	77	74	73	67	80	75	73	80	89	80	78	64	66	63	79	83	81
	8	73	70	72	70	55	74	66	65	74	82	70	74	59	62	56	68	71	73
	9	75	69	62	71	62	67	66	68	77	86	64	72	68	59	56	65	73	55
	10	72	67	70	63	55	71	70	65	66	73	62	68	58	64	60	68	69	82
	11	75	76	76	73	65	82	77	69	80	88	70	82	73	68	61	76	79	86
	12	61	64	62	63	54	66	63	62	63	72	61	67	68	61	55	65	67	69
	13	67	65	63	66	46	66	63	61	69	84	55	66	53	55	51	52	63	72
	14	63	59	61	53	45	63	59	57	65	69	53	53	51	52	48	48	62	70
	15	69	67	67	66	63	69	62	60	67	76	61	65	62	61	57	66	67	77
	16	61	55	57	50	43	54	52	58	59	70	41	55	50	44	45	45	57	60
	17	69	66	70	66	49	67	61	65	70	81	63	65	58	53	52	62	70	76
	18	72	66	68	61	57	65	64	62	68	75	67	67	64	56	57	62	70	75
	19	74	74	69	76	68	76	77	69	73	82	73	77	66	70	64	74	79	83
	20	54	50	49	42	36	53	48	45	48	63	47	60	47	41	40	47	55	56
	21	55	50	54	51	41	50	53	44	55	58	45	53	42	46	38	48	53	49
	22	45	43	46	41	34	47	46	37	44	53	44	41	38	36	34	35	42	45
	23	46	32	32	27	28	36	33	24	30	39	24	28	31	31	30	29	35	44
	24	34	30	36	34	26	38	33	33	32	41	31	34	36	27	32	34	33	40
	25	43	45	51	42	31	44	40	44	45	60	44	49	55	36	32	39	44	48
	26	50	49	49	54	45	52	47	43	46	58	53	59	42	38	42	50	45	49
	27	51	52	51	53	37	52	44	52	55	64	47	47	51	44	44	45	50	56
	28	67	63	65	58	51	66	63	61	66	74	62	74	60	54	53	53	62	72
	29	43	41	42	36	35	40	38	38	42	55	39	47	31	33	31	37	39	47
	30	37	36	36	39	30	43	33	36	32	40	35	38	32	27	36	34	35	34
	31	35	51	39	30	31	39	30	30	28	36	34	33	25	32	33	35	27	28
	32	54	46	42	41	33	50	42	38	42	62	40	46	42	40	36	43	47	48
	33	33	31	31	30	23	32	34	24	28	36	32	31	29	23	28	30	34	36
	34	59	57	57	54	40	58	60	51	54	70	53	59	55	45	46	54	62	68
	35	29	33	43	36	32	34	32	29	32	34	35	23	42	29	29	32	33	39

TABLE 57 (Continued)

READING VOCABULARY ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Vocabulary Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.1.1 Knowledge of the meaning of words in context (continued)	36	55	49	55	47	40	53	47	41	50	59	45	48	44	40	44	47	54	53
	37	21	20	15	17	22	18	21	25	21	19	24	21	17	18	21	18	23	23
	38	22	23	23	22	26	22	21	24	21	30	17	17	25	19	22	26	20	25
	39	37	34	35	36	31	41	33	31	33	32	29	37	28	33	36	36	35	37
	40	40	40	45	38	33	44	33	31	38	51	34	43	51	36	32	41	36	50

TABLE 58

READING COMPREHENSION ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.2.1 Knowledge of directly stated details (literal meaning)	12	54	54	57	58	47	53	49	52	53	60	52	54	44	51	49	53	49	65
	17	53	51	56	47	57	56	43	46	48	57	47	49	48	44	44	54	54	59
	33	77	76	77	76	71	77	78	73	73	86	76	69	60	65	68	79	79	86
	40	46	43	43	41	34	47	44	41	40	49	48	44	30	39	37	46	46	50
	44	24	26	32	24	17	30	24	23	26	33	24	24	18	24	21	26	27	29
1.1.2.2 Comprehension of words and phrases (simple rewording)	7	71	69	70	73	57	72	66	67	66	78	69	75	64	63	56	76	70	73
	9	64	60	61	64	49	65	59	56	59	75	54	63	58	51	43	60	56	68
	15	72	70	72	73	59	69	66	65	70	82	66	75	66	63	58	67	70	82
	19	51	47	49	45	29	48	46	43	47	57	43	46	42	43	36	49	52	61
	27	64	61	62	69	54	60	57	57	57	71	61	66	50	51	50	58	63	74
	29	61	60	66	57	54	61	54	54	59	73	57	59	42	53	50	58	61	73
1.1.2.3 Comprehension (paraphrasing) of the meaning of ideas	8	81	80	78	83	73	82	81	81	79	88	78	84	75	72	72	80	84	88
	10	58	57	55	62	50	60	54	51	55	66	54	61	54	51	50	62	55	68
	16	58	54	53	56	49	57	50	53	55	67	50	46	55	41	42	56	56	65
	26	65	62	67	63	58	64	54	55	60	74	63	67	42	55	52	65	64	75
	30	63	53	53	52	49	56	50	49	52	64	51	66	42	44	47	47	55	63
1.1.2.4 Comprehension of main ideas	5	67	62	64	66	57	62	59	57	63	73	59	62	62	53	52	55	64	69
	11	66	66	68	67	55	72	63	65	66	70	63	72	58	64	58	69	67	77
	13	73	68	69	66	56	68	72	65	68	79	65	73	59	51	59	65	72	79
	22	54	62	61	64	56	62	66	65	60	67	58	62	52	55	59	62	62	67
	31	52	45	42	42	42	47	44	42	41	54	41	48	39	40	41	43	43	52
	34	50	49	51	51	41	50	50	44	45	58	50	42	42	45	40	49	49	53
	37	43	40	42	39	43	42	40	35	36	48	44	38	26	36	32	38	42	47
	45	35	38	39	34	37	40	40	36	36	41	36	36	23	35	35	32	43	46
1.1.2.5 Comprehension of relationships	2	82	76	78	83	65	80	72	73	77	82	73	78	72	72	66	81	75	85
	4	66	66	64	66	65	67	70	64	68	70	55	72	55	62	55	63	73	70
	32	33	32	28	30	21	33	31	27	31	41	27	31	27	28	29	29	32	39
	36	27	26	31	29	15	28	23	23	25	32	22	27	22	24	23	24	24	29
	41	36	30	31	28	25	33	27	25	31	30	30	31	37	27	33	24	31	38
	42	32	30	31	30	25	36	32	24	29	33	31	26	31	28	29	27	28	27

TABLE 58 (Continued)

READING COMPREHENSION ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Reading Comprehension Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.2.6 Comprehension (draw conclusions) of given facts and statements	20	34	36	32	32	21	37	33	37	33	43	38	34	42	34	33	40	35	37
	25	41	38	44	39	26	36	37	36	39	49	35	46	36	29	32	32	42	37
	28	58	53	54	57	46	56	52	49	48	68	49	52	51	42	41	48	53	63
	38	50	46	47	47	43	48	45	44	42	56	42	42	36	43	37	44	44	54
	43	44	44	49	43	36	51	49	41	41	50	44	46	35	38	39	36	46	50
1.1.2.7 Comprehension (inference) of contextual clues	1	77	71	72	77	59	74	71	70	70	78	71	72	86	64	61	74	67	79
	3	44	40	41	38	40	45	42	34	38	45	41	39	44	37	35	34	34	50
	23	57	50	50	51	41	52	46	44	48	63	48	46	45	47	40	48	52	56
	24	77	73	72	76	66	71	74	69	71	83	68	77	65	65	63	72	79	80
	39	47	38	48	36	27	39	33	33	38	49	34	28	33	34	30	33	36	45
1.1.2.8 Analysis of indefinite or incomplete statements (extended meaning)	6	60	55	55	58	49	63	50	49	57	67	56	56	56	43	43	51	52	66
	14	68	67	73	63	50	70	60	65	67	84	64	67	58	55	53	60	64	75
	18	64	62	62	64	57	66	63	63	60	72	55	64	55	53	53	59	65	74
	21	65	62	65	63	56	60	58	57	59	73	64	64	55	57	51	62	62	69
	35	59	56	59	59	46	57	54	53	49	67	54	67	45	47	44	52	60	65

TABLE 59

LANGUAGE/SPELLING ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language/Spelling Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.3.1 Knowledge of correctly and incorrectly spelled words	1	72	72	75	71	60	76	80	65	72	74	73	82	93	69	64	83	75	34
	2	85	85	84	89	79	85	90	87	88	90	85	82	85	82	78	93	85	37
	3	88	87	89	90	85	90	93	87	92	92	89	91	88	83	77	91	88	38
	4	61	62	68	65	57	65	65	59	64	75	58	62	62	56	46	63	60	25
	5	68	68	69	72	52	71	73	61	65	78	65	71	52	67	61	71	73	34
	6	68	65	67	71	55	66	69	61	67	77	66	61	66	58	52	64	68	31
	7	81	77	82	77	65	82	82	74	79	87	76	85	66	72	67	78	80	36
	8	75	75	77	77	63	81	77	72	78	87	75	83	65	67	66	76	79	35
	9	66	62	61	58	49	63	63	64	63	74	60	62	49	59	54	62	64	33
	10	72	70	74	65	57	73	71	66	75	83	72	72	61	60	64	66	74	34
	11	59	54	59	59	48	53	56	46	52	62	54	61	43	50	48	65	55	21
	12	55	49	54	52	47	54	52	46	52	57	51	46	46	47	37	51	45	21
	13	61	52	57	49	43	56	54	49	53	64	55	48	42	46	44	53	52	29
	14	72	71	72	74	60	74	73	68	74	82	75	72	70	62	60	70	73	36
	15	62	64	69	66	49	65	68	60	64	77	63	64	59	60	57	67	64	31
	16	59	55	51	51	42	59	60	53	63	66	53	62	50	49	44	50	60	28
	17	54	53	54	56	52	54	55	45	55	62	54	54	47	43	45	51	57	27
	18	44	44	48	45	29	50	44	41	50	48	43	47	32	44	36	43	49	28
	19	36	41	38	43	29	45	41	35	41	48	42	48	25	37	36	45	45	21
	20	73	74	74	78	66	76	79	72	77	84	72	72	65	68	66	76	77	36
	21	55	54	59	58	42	59	59	51	56	61	49	49	53	50	47	47	55	27
	22	47	44	45	43	37	48	51	43	46	52	41	44	33	40	36	43	46	19
	23	45	43	48	46	37	47	41	43	49	52	42	40	37	37	34	41	44	22
	24	56	58	58	62	48	66	61	46	63	65	63	54	55	49	50	57	64	28
	25	31	23	23	25	25	24	24	18	29	30	23	21	18	19	18	20	25	14
	26	40	36	41	35	22	43	36	29	42	43	33	35	42	36	31	30	34	17
	27	37	38	38	34	29	42	41	36	36	50	31	36	26	33	34	42	35	20
	28	31	36	37	30	21	40	23	30	36	42	33	39	28	31	25	34	38	17
	29	38	35	44	35	50	34	36	36	42	35	38	33	39	33	32	35	34	12
	30	40	29	28	27	32	34	34	27	28	33	30	25	41	27	27	21	28	11

TABLE 60

LANGUAGE MECHANICS ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Mechanics Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.4.1 Application of punctuation skills	1	84	82	83	87	71	86	89	79	84	88	84	88	93	79	74	94	82	36
	2	70	71	73	76	60	75	72	65	72	80	71	77	68	63	67	87	71	29
	3	70	65	65	65	54	68	63	55	67	77	66	75	54	57	56	77	69	25
	4	52	57	62	58	48	60	66	54	58	63	59	52	56	49	50	74	54	25
	5	70	64	60	70	55	67	61	63	65	75	63	71	59	59	56	74	67	31
	6	74	75	83	79	52	78	79	71	80	83	79	83	69	69	64	84	79	37
	7	68	65	73	68	54	67	68	63	69	75	66	61	70	60	51	76	67	33
	8	68	62	68	63	49	63	68	60	66	70	59	67	53	55	50	70	67	29
	9	44	33	26	37	33	31	30	32	39	35	35	45	40	34	26	37	39	15
	10	53	52	55	57	38	54	55	46	56	59	48	57	59	46	42	54	58	29
	11	55	48	52	46	35	54	51	47	52	51	49	56	43	47	41	51	54	23
	12	51	52	61	53	39	54	60	50	51	55	50	51	55	45	44	60	54	28
	13	59	55	58	63	40	54	63	54	54	60	56	56	44	53	48	59	55	23
1.1.4.2 Application of capitalization skills	14	57	63	65	70	50	68	59	53	59	74	63	64	87	55	55	75	59	33
	15	48	48	57	45	35	53	55	41	51	60	52	53	42	41	38	44	46	24
	16	49	54	60	52	41	56	52	43	53	65	59	59	55	44	49	65	51	28
	17	46	49	51	53	40	52	48	44	49	58	51	51	54	40	42	60	49	26
	18	49	56	64	61	40	62	58	46	55	67	56	56	60	47	45	64	55	30
	19	21	24	30	27	19	24	26	18	26	28	19	17	26	21	18	34	27	06
	20	24	28	38	30	20	28	27	23	28	34	24	26	31	24	21	25	28	10
	21	48	53	61	57	37	58	53	42	54	64	58	52	58	41	44	66	52	29
	22	34	42	48	40	35	47	37	32	42	46	47	43	42	41	40	53	42	29
	23	40	45	54	44	38	47	45	36	43	53	51	36	44	37	39	58	45	25
	24	38	45	51	43	40	50	44	43	41	51	54	42	49	39	39	51	45	26
	25	28	38	43	37	26	46	37	28	39	45	40	31	35	33	34	48	33	21

TABLE 61

LANGUAGE EXPRESSION ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Language Expression Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.5.1 Application of correct grammatical usage	26	80	71	77	71	63	73	71	71	75	75	76	81	92	67	64	73	69	26
	27	78	68	69	69	62	72	74	69	74	84	60	77	58	55	56	61	70	31
	28	45	44	50	47	40	46	49	39	45	49	42	43	34	47	38	50	39	20
	29	70	63	70	65	60	65	65	64	66	70	61	64	63	59	57	63	66	26
	30	71	62	68	64	63	60	63	58	67	66	66	55	52	65	58	70	60	28
	31	51	47	51	46	37	52	53	43	49	55	50	46	48	44	37	44	51	23
	32	69	60	62	64	50	62	67	56	67	71	56	63	50	48	49	59	64	29
	33	56	55	54	59	50	53	58	53	56	66	50	60	53	52	47	56	57	25
	34	34	26	26	25	21	32	26	28	28	32	17	24	34	23	21	29	24	10
	35	59	58	64	63	49	63	64	54	59	67	56	61	47	52	51	14	61	26
1.1.5.2 Comprehension of clarity and/or economy of expression	51	47	54	60	57	40	60	62	45	53	61	47	61	81	51	44	49	54	26
	52	23	21	19	21	13	24	21	21	18	24	21	21	22	20	17	19	23	11
	53	27	28	31	27	26	28	26	29	29	28	25	31	26	30	23	29	34	12
	54	31	30	28	27	25	34	26	25	30	33	32	36	32	28	30	35	32	15
	55	45	42	48	46	33	46	39	39	48	49	38	37	42	43	36	41	40	17
1.1.5.3 Comprehension of the author's implication (word choice)	36	63	60	62	65	47	62	61	53	55	72	57	57	87	58	45	62	57	33
	37	78	73	76	74	61	76	78	70	76	84	73	79	65	71	63	74	77	39
	38	84	83	84	88	76	87	89	81	85	93	87	85	73	80	74	84	87	39
	39	63	55	58	58	47	60	50	56	53	61	55	63	55	53	49	54	59	26
	40	48	51	53	54	33	58	53	49	55	64	47	46	43	39	40	55	49	25
	41	59	59	62	61	46	61	60	55	64	76	55	59	64	49	45	53	60	32
	42	34	27	27	30	24	34	25	27	25	31	25	28	26	28	24	24	24	21
	43	40	36	35	29	27	33	35	33	38	53	36	41	32	30	30	31	36	20
	44	43	37	42	30	29	46	29	35	33	60	24	22	33	32	23	27	41	20
	45	39	38	41	34	25	46	44	40	37	47	31	40	34	35	32	33	39	20
	46	69	68	74	77	51	72	63	58	72	76	65	73	80	64	58	72	67	33
	47	53	50	57	54	46	54	55	50	53	51	49	51	46	47	51	50	47	21
	48	54	50	53	49	32	58	53	45	53	59	40	56	42	46	39	51	55	29
	49	52	50	55	57	38	54	50	51	52	62	50	56	53	40	39	49	45	26
	50	46	46	50	50	35	48	41	44	47	57	43	47	39	45	36	50	45	23

TABLE 62

ARITHMETIC COMPUTATION ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.6.1 Application of addition skills	1	95	93	92	94	89	94	95	95	95	94	96	93	96	92	89	93	94	93
	2	91	90	91	93	87	90	91	91	93	93	92	93	87	90	82	91	90	89
	3	93	90	89	90	85	90	91	91	91	93	91	88	92	88	84	94	92	92
	4	82	80	81	85	75	79	81	81	83	82	79	78	77	78	70	85	82	76
	17	72	72	75	77	63	71	68	72	74	77	67	73	60	67	64	77	73	68
	18	77	77	81	78	65	82	74	76	80	82	75	80	72	73	67	79	80	75
	19	64	64	66	68	59	62	70	63	65	69	65	65	64	60	55	68	60	64
	20	60	62	69	64	51	64	63	55	66	64	63	65	49	58	54	68	64	55
	33	35	34	28	33	34	42	32	36	38	40	32	29	39	30	23	35	31	29
	34	21	18	16	18	18	21	22	20	17	17	14	09	24	16	19	15	19	27
	35	53	57	61	53	45	60	61	51	59	66	55	52	50	48	46	62	59	65
	36	31	35	34	35	29	39	37	29	35	34	37	31	33	31	31	40	40	44
1.1.6.2 Application of subtraction skills	5	91	89	90	90	87	88	86	89	92	91	91	95	84	85	84	91	89	90
	6	90	88	88	92	85	87	87	84	90	93	92	93	85	84	81	91	92	84
	7	75	67	70	68	56	63	65	62	69	79	61	66	73	62	54	74	68	71
	8	71	69	70	70	57	68	67	66	71	75	65	65	72	65	61	74	68	71
	21	65	66	73	68	59	64	67	66	68	72	65	71	54	59	55	71	70	71
	22	53	50	55	54	38	51	46	46	53	56	48	58	49	46	39	56	50	58
	23	78	78	78	83	68	77	82	80	80	83	78	80	66	69	67	82	84	82
	24	52	48	55	54	35	49	47	46	49	49	47	63	46	41	39	55	48	52
	37	38	38	41	43	29	41	39	38	41	42	37	39	39	32	35	35	34	35
	[illegible]	51	57	61	60	39	60	60	52	60	66	52	55	56	49	48	59	57	62
	39	35	45	41	36	30	48	45	39	46	58	44	43	38	39	34	53	45	56
	40	45	53	56	50	43	55	57	51	56	65	47	58	50	42	42	58	52	55
1.1.6.3 Application of multiplication skills	9	87	86	85	88	82	85	90	83	88	90	87	87	71	83	77	90	87	86
	10	77	79	81	80	73	79	79	73	79	87	80	83	72	75	68	80	78	80
	11	84	82	84	85	77	83	83	79	85	88	81	87	75	75	73	83	83	79
	12	76	78	79	80	68	75	75	69	85	88	78	78	69	72	66	79	77	81
	25	64	63	66	64	44	67	64	58	65	73	65	74	57	52	50	68	66	64
	26	55	54	63	54	41	56	48	49	57	62	54	60	55	49	43	61	54	58
	27	53	57	62	54	42	59	49	50	60	67	59	63	51	49	48	62	58	54
	28	38	49	58	50	38	52	40	40	54	60	45	38	55	43	39	56	48	40
	41	31	36	42	37	27	40	27	37	38	36	36	32	47	32	32	42	30	42
	42	23	30	35	31	26	29	29	28	34	32	30	31	19	28	27	39	27	31

TABLE 62 (Continued)

ARITHMETIC COMPUTATION ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Computation Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.6.3 Application of multiplication skills (continued)	43	19	16	14	15	15	19	17	12	17	19	15	12	21	14	13	15	14	20
	44	38	48	46	40	35	51	54	41	50	59	52	42	37	41	36	54	42	47
1.1.6.4 Application of division skills	13	85	82	83	84	66	83	86	75	82	90	79	93	75	76	72	82	82	85
	14	84	81	82	85	65	83	84	79	87	87	78	89	75	77	71	83	75	85
	15	83	79	82	81	64	83	83	73	77	85	80	85	71	77	69	79	75	82
	16	58	61	71	66	42	64	60	50	62	69	56	65	56	52	51	71	61	64
	29	54	57	64	58	48	63	51	48	60	63	59	54	60	52	45	64	55	60
	30	50	55	61	59	45	57	52	47	59	58	56	57	46	49	50	61	58	54
	31	54	57	60	62	39	63	53	52	61	62	55	59	57	50	45	74	56	63
	32	52	59	65	62	42	63	60	49	60	66	56	59	61	55	48	67	60	59
	45	31	36	30	37	24	40	39	31	40	39	35	38	25	33	31	44	36	36
	46	28	31	36	31	26	32	33	31	32	32	30	27	37	31	29	26	30	32
	47	36	37	36	36	26	39	40	31	39	42	35	34	34	32	30	45	32	45
	48	22	24	23	25	29	26	29	21	22	23	26	16	32	24	24	24	22	23

TABLE 63

ARITHMETIC CONCEPTS ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Test of Basic Skills, Form Q, Level 2
Arithmetic Concepts Subtest

Skill	Concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.7.1	Knowledge of arithmetic concepts	2	91	41	38	43	37	42	41	40	46	48	38	43	43	35	32	38	42	44
		9	87	68	72	70	51	63	69	67	75	78	66	62	68	59	59	73	70	73
		11	84	62	64	59	46	63	60	59	68	70	61	72	63	59	51	57	65	62
		14	84	56	57	50	34	56	54	52	65	68	54	56	49	46	43	54	57	60
		20	60	25	24	27	19	26	23	22	28	29	23	17	32	23	23	24	20	29
		27	54	42	42	40	27	43	42	32	48	51	38	48	49	36	33	43	42	42
1.1.7.2	Comprehension of arithmetic concepts (converting form)	1	95	42	72	70	54	69	71	66	73	79	71	80	92	62	62	74	67	74
		6	78	79	74	81	66	78	76	76	84	87	75	78	78	72	69	82	80	87
		29	42	42	40	45	32	45	46	37	39	47	42	43	43	40	38	45	43	45
		30	37	34	36	34	29	38	33	32	31	35	38	37	40	33	32	34	36	34
1.1.7.3	Comprehension of equations	5	82	82	84	83	71	83	85	76	85	92	81	89	70	73	67	83	81	88
		10	74	73	66	76	65	71	76	71	81	76	74	79	69	72	67	77	69	77
		13	53	53	48	52	40	58	50	49	58	63	53	56	50	45	42	57	45	53
		15	55	54	55	50	46	54	56	53	60	62	47	65	47	49	47	52	50	63
1.1.7.4	Comprehension of comparative relationships	4	38	32	35	30	28	37	23	33	30	30	31	49	36	31	33	34	34	42
		7	87	84	85	88	78	83	85	81	87	89	81	91	76	78	76	84	87	82
		8	71	70	69	66	55	71	70	64	75	80	69	78	72	60	57	67	72	77
		17	31	32	32	28	24	31	37	35	38	53	29	22	31	32	22	41	33	28
		23	55	57	55	60	38	57	58	47	65	67	56	53	53	49	45	62	53	58
1.1.7.5	Comprehension of relationships (ratio, time, part-whole, sequence, geometric)	3	58	58	59	57	47	58	58	50	65	72	53	62	50	53	45	54	56	64
		12	69	73	71	74	64	72	71	73	78	83	66	75	64	67	63	78	70	70
		18	59	57	56	54	46	57	59	50	65	68	47	68	54	49	44	62	53	59
		19	41	49	52	48	38	48	47	42	53	57	47	48	58	47	39	50	42	59
		25	50	58	44	51	41	60	66	49	65	73	58	48	52	49	49	68	53	68
		26	50	63	54	58	50	64	71	54	71	76	67	54	60	54	50	70	61	71
1.1.7.6	Analysis of the components of arithmetic word problems (organization)	16	61	63	62	64	42	65	64	60	67	73	60	71	51	56	54	60	62	77
		21	64	65	66	68	59	61	67	61	68	75	67	67	54	58	58	62	64	69
		22	38	39	39	36	21	45	37	32	47	49	37	43	37	29	28	36	42	41
		24	36	33	27	32	22	31	32	30	34	37	37	31	42	28	32	37	36	39
		28	23	21	18	17	10	23	21	17	23	26	22	07	24	21	19	23	23	20

TABLE 64

ARITHMETIC APPLICATIONS ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Arithmetic Applications Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.8.1 Comprehension of problem-solving (selecting method)	37	46	44	43	44	37	43	42	39	48	54	41	35	44	39	40	50	39	45
	40	44	41	41	42	29	40	40	41	42	47	37	49	42	40	35	47	39	45
	42	59	55	53	56	38	56	51	47	63	68	52	55	49	46	46	59	50	63
	43	54	50	49	48	38	53	45	43	52	60	46	56	40	44	48	51	45	59
	47	30	28	27	27	24	26	33	29	31	30	28	19	34	27	26	26	28	34
	49	28	24	19	23	23	22	20	26	22	26	25	22	33	26	24	24	20	21
	50	37	35	33	34	32	38	36	29	34	35	33	37	40	35	33	38	36	42
1.1.8.2 Comprehension of problem-solving (correct solution)	31	68	66	59	66	48	62	63	59	68	76	62	65	80	62	59	74	64	75
	32	77	78	75	75	65	79	76	74	80	86	77	79	72	77	69	79	77	85
	34	70	66	63	71	49	66	61	57	69	75	66	68	62	60	58	68	66	73
	35	59	58	53	61	42	57	54	58	67	65	54	57	58	51	50	65	58	70
	36	60	59	59	59	40	64	60	52	65	68	54	59	55	54	48	62	55	65
	39	54	53	53	53	30	57	52	49	61	57	53	54	44	48	47	55	54	62
	46	43	49	45	47	36	47	52	46	52	59	44	42	40	48	40	49	47	56
1.1.8.3 Analysis of the components of arithmetic word problems (organization)	33	56	54	46	54	39	53	53	49	58	64	57	61	54	45	48	53	55	62
	38	39	45	40	38	35	48	44	40	45	51	41	36	48	38	40	44	49	52
	41	50	44	40	42	43	44	46	42	50	46	46	49	41	45	38	43	44	48
	44	43	42	40	40	37	42	46	47	46	45	44	47	44	37	37	41	42	51
	45	33	35	34	33	23	36	38	36	35	40	37	36	37	32	27	44	30	37
	48	29	28	25	26	23	29	26	25	30	31	28	20	35	27	23	22	30	36

TABLE 65

STUDY SKILLS/REFERENCE MATERIALS ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT
BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Reference Materials Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.9.1 Knowledge of parts of books	12	47	40	45	48	35	41	42	41	36	48	38	36	35	37	33	35	40	18
	13	56	54	58	57	46	57	61	53	61	62	53	59	53	51	44	51	49	21
	14	14	41	45	41	33	42	47	42	41	45	47	36	42	39	35	40	44	19
	15	57	51	50	55	53	54	53	47	54	61	47	53	44	45	41	54	51	23
	16	38	38	42	39	39	36	36	38	39	45	34	36	41	33	33	37	45	18
1.1.9.2 Knowledge of dictionary use	7	55	47	47	48	43	47	49	43	47	56	49	51	42	40	41	48	48	23
	8	48	47	49	47	42	53	54	44	47	51	47	45	44	44	43	44	55	23
	17	52	51	46	54	41	58	45	48	54	64	51	63	41	40	42	51	51	24
	18	48	51	55	55	39	55	50	47	54	61	56	61	43	43	42	52	48	21
	19	47	51	53	52	43	53	53	45	52	63	52	45	50	49	45	49	49	17
	20	31	36	29	36	30	42	33	34	41	41	39	32	28	36	36	42	35	16
1.1.9.3 Knowledge of library use	1	43	46	49	44	43	50	44	47	50	51	46	47	87	43	38	49	41	20
	2	41	46	45	45	49	53	46	44	48	53	46	46	53	41	41	43	41	18
	3	57	52	53	60	54	52	53	51	52	57	53	64	45	47	48	46	56	23
	4	63	68	71	70	54	71	68	67	69	76	71	84	57	61	62	66	71	31
	5	41	38	38	45	29	42	41	35	40	42	33	43	38	30	30	41	39	20
	6	37	38	37	38	40	40	36	37	39	45	43	52	32	31	34	42	38	20
	9	51	48	49	48	48	53	47	50	48	58	50	38	55	38	41	52	48	21
	10	39	32	36	35	21	34	30	33	36	38	33	35	22	27	29	32	33	16
	11	38	33	36	37	31	39	34	32	33	43	38	45	38	23	17	35	32	13

TABLE 66

STUDY SKILLS/GRAPHIC MATERIALS ITEM ANALYSIS INFORMATION--PERCENTAGE CORRECT
BY EDUCATIONAL DEVELOPMENT DISTRICT FOR FOURTH GRADE

Comprehensive Tests of Basic Skills, Form Q, Level 2
Study Skills/Graphic Materials Subtest

Skill/concept number and description	Item number	Criterion percentage correct	Kentucky percentage correct	Percentage correct by Educational Development District															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1.10.1 Comprehension of symbols, legends, and data presented in graphic or tabular form	22	44	38	41	41	31	40	42	35	43	38	39	44	28	36	34	30	43	23
	26	70	66	76	70	60	68	70	64	70	76	70	77	55	53	52	64	69	30
	27	51	40	41	42	38	40	32	41	38	52	44	47	37	31	31	36	44	25
	28	65	58	59	61	46	62	58	57	64	71	58	68	46	50	49	50	62	26
	29	23	20	21	22	22	25	14	23	18	23	18	22	22	22	18	18	21	07
	31	69	67	68	72	57	68	70	65	68	80	66	66	89	57	52	64	69	29
	32	68	62	66	69	51	62	64	60	66	74	68	67	48	52	49	62	65	31
	33	58	63	67	67	51	63	65	59	66	78	64	66	52	55	51	68	65	26
1.1.10.2 Comprehension of relationships presented in graphical form	21	71	56	69	70	55	73	69	66	67	74	64	67	87	61	56	64	67	28
	23	59	52	54	52	41	54	54	49	52	62	53	61	44	44	43	52	55	26
	30	40	36	38	36	37	41	36	36	38	38	38	26	31	33	33	36	37	19
	34	50	46	46	46	37	50	43	40	52	58	42	51	43	38	35	49	44	20
	35	47	46	46	46	35	50	50	43	48	57	47	49	42	40	35	43	45	18
	38	68	66	66	71	54	66	70	59	69	78	71	75	58	60	56	64	70	31
	46	64	63	63	63	57	68	75	62	67	72	69	67	48	55	51	60	64	29
	48	52	52	53	55	52	[illegible]	56	53	57	65	54	47	41	42	41	46	52	23
	49	40	43	44	44	38	49	47	43	46	54	42	40	41	36	30	44	43	20
	50	44	45	42	43	41	52	48	43	48	57	47	32	41	39	32	41	48	25
1.1.10.3 Comprehension (draw conclusions) of graphic data	25	48	40	44	36	40	41	41	38	47	44	40	44	41	33	39	35	45	18
	36	55	56	54	61	45	64	54	49	60	64	62	64	54	52	50	58	54	25
	37	56	56	55	62	51	56	58	56	59	69	55	65	48	47	45	55	55	26
	40	55	55	50	60	49	57	59	52	61	60	57	61	49	52	48	56	51	29
	41	43	47	48	48	40	51	48	50	48	57	50	47	42	38	37	43	48	25
	43	35	40	40	40	36	45	43	43	46	45	42	47	41	33	33	33	44	18
	47	45	45	44	46	40	45	51	47	46	56	46	42	41	41	38	39	45	19
1.1.10.4 Analysis of graphic data and determination of extended meaning	24	47	40	44	46	32	45	39	44	43	44	46	42	36	35	30	47	43	17
	39	58	53	59	60	45	53	56	50	57	59	52	58	42	47	45	54	55	23
	42	34	32	37	36	21	33	31	32	31	40	36	36	19	30	27	32	32	11
	44	37	40	38	37	39	41	47	45	36	43	35	43	35	41	40	41	42	15
	45	45	42	38	42	41	41	45	44	43	48	44	40	32	38	36	41	48	20